

**EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAM ON LEVEL
OF KNOWLEDGE REGARDING PREVENTION OF PERIPHERAL
VASCULAR DISEASE AMONG DIABETIC PATIENTS ADMITTED
IN G KUPPUSWAMY NAIDU MEMORIAL HOSPITAL, COIMBATORE**

**BY
GEETHU.M.G**

**A DISSERTATION SUBMITTED TO THE TAMIL NADU DR. M. G. R.
MEDICAL UNIVERSITY, CHENNAI, IN PARTIAL FULFILLMENT
OF REQUIREMENT FOR THE DEGREE OF
MASTER OF SCIENCE IN NURSING
APRIL 2015**

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DECLARATION

I hereby declare that the present dissertation entitled **“Effectiveness of Video Assisted Teaching Program on Level of Knowledge Regarding Prevention of Peripheral Vascular Disease Among Diabetic Patients admitted in G Kuppuswamy Naidu Memorial Hospital, Coimbatore”** is the outcome of the original research work undertaken and carried out by me under the guidance of **Dr. Latha Venkatesan**, M.Sc(N)., M.Phil(N)., Ph.D(N)., MBA., Principal, Apollo College of Nursing and **Mrs.D. Sasikala**, M.Sc(N)., Reader, Apollo College of Nursing, Chennai. I also declare that the material of this has not found in any way, the basis for the award of any degree or diploma in this university or any other university.

M.Sc (N) II Year

ACKNOWLEDGEMENT

I thank **God Almighty** for showering his everlasting love and blessings upon me and guidance in the matters at hand and for clearly showing me the way to conduct my work with a spirit of joy and enthusiasm throughout my study.

I dedicate my heartfelt thanks and gratitude to our esteemed leader **Dr. Latha Venkatesan, MBA., M.Sc (N)., M.Phil (N)., Ph.D (N).,** Principal, Apollo College of Nursing for her tremendous help, continuous support, enormous auspice, valuable suggestions and tiredless motivation to carry out my study successfully.

My bouquet of thanks to **Prof. Lizy Sonia.A, M.Sc (N)., Ph.D (N).,** Vice Principal, Apollo College of Nursing, for her valuable guidance and support rendered by her to bring this task to completion.

I take this opportunity to express my great pleasure and deep sense of gratitude to my guide **Mrs. D.Sasikala. M.Sc (N).,** Reader, Medical Surgical Nursing Department, for her kind support, patience, valuable guidance, enlightening ideas and willingness to help at all times for successful completion of this research work.

With special reference I thank **Dr R. Srinivasan, MD (General Medicine)., MRCP(UK)., CCST(UK).,** Consultant Diabetologist, G.Kuppuswamy Naidu Memorial Hospital, Coimbatore for his elegant direction and helpful suggestions for performing the study.

I owe my special thanks to **Prof. K. Vijayalakshmi, M.Sc (N)., M.A, Psychology., Ph.D (N).,** Research Coordinator, Apollo College of Nursing for her continuous guidance in completing my study.

My deep gratitude to **Prof. Nesa Sathya Satchi, M.Sc (N),** Course Coordinator for her constructive ideas and enormous concern. With the special word of reference, I thank all the **experts** for validating my tool and offering worthy suggestions to make it effective.

I am indebted to **Prof. Jaeny Kemp, M.Sc (N)., Ph.D (N)., Principal,** Institute of Nursing G.Kuppuswamy Naidu Memorial Hospital, a benevolent personality, for her valuable guidance, encouragement and her continued support with sincere interest.

I thankfully acknowledge, **Dr. Ramkumar Raghupathy, M.S (Gen Surg)., M.ch (Paed Surg)., FIAPS., MBA (Hospital Management)., the DEAN** for having given me the opportunity to utilize the facilities at G Kuppuswamy Naidu Memorial Hospital, Coimbatore.

I express my words of appreciation to **Dr. P.K Sivakumaran, M.Sc., MBA., M.Phil., Ph.D., Statistician** for his expert guidance and suggestions in the statistical analysis of data.

I also extend my special thanks to all the **Faculty in the Department of Medical Surgical Nursing, Head of all the Departments** for rendering their valuable guidance and ideas in completing my study.

Extensive sense of gratitude goes to **Prof. P Shanthi, M.Sc(N). Prof. C Deborah Packiajothi, M.Sc(N)., Prof. P Viji, M.Sc(N)., Ph.D (N).,** and other

teaching and non teaching faculties of Institute of Nursing, GKNM Hospital, Coimbatore for their timely help, constructive criticism, guidance and suggestions in all our academic matters and encouragement throughout the period of study.

I would fail in my duty if I forget to thank my loved ones behind the scene. I am grateful to my parents **Mr.K.Muraleedharan Nair and Mrs. Geetha Muraly** and sister **Ms.Arya.M.G.** My genuine thanks to **Mr. Naresh** for his support in all times of ups and downs, and helped me in completing my study successfully.

A note of thanks to the **Librarians** at Apollo College of Nursing for extending their timely help towards my research project. My special gratitude to **Mr. Kannan**, Universe Computers, Vanagaram, for his constructive and creative efforts in typing the dissertation.

I extend my heartfelt gratitude towards each of my **Patients** who participated in the study and extend their cooperation throughout the period of the study. I am extremely grateful to all the **Staff Nurses** of preoperative wards of cardiothoracic surgery at G Kuppuswamy Naidu Memorial Hospital.

I have immense pleasure in thanking **Ms. Manimozhi**, for her timely cooperation in audio recording and Tamil translation. I would like to thank **Mr.Benny Pradeep**, C7 Studio, for his sincere effort in editing the video meticulously.

With a sense of deep gratitude, I acknowledge my **classmates & seniors** for their sincere concern, help and contributions to this effort.

SYNOPSIS

Statement of the Problem

A Pre Experimental Study to Assess the Effectiveness of Video Assisted Teaching Program on Level of Knowledge Regarding Prevention of Peripheral Vascular Disease Among Diabetic Patients admitted in G Kuppuswamy Naidu Memorial Hospital at Coimbatore

The Objectives of the Study were

1. To assess the pre test and post test level of knowledge on prevention of peripheral vascular diseases among diabetic patients.
2. To assess the effectiveness of video assisted teaching by comparing the pre test and post test scores of knowledge on prevention of peripheral vascular disease among diabetic patients.
3. To determine the association between the selected demographic variables of diabetic patients and their pre test and post test scores of knowledge on prevention of peripheral vascular disease.
4. To determine the association between the selected clinical variables of diabetic patients and their pre test and post test scores of knowledge on prevention of peripheral vascular disease.

The conceptual framework for this study is based on “Theory of Goal Attainment” by Imogene King. A pre experimental study of one group pre test and post test design was used. The study included 50 diabetic patients selected by non probability convenient sampling technique. The present study was conducted in G.Kuppuswamy Naidu memorial Hospital, Coimbatore. The variables of the study

were video assisted teaching program and knowledge on prevention of peripheral vascular disease.

An extensive review of literature and guidance by experts laid foundation to the development of demographic variable proforma of diabetic patients, clinical variable proforma of diabetic patients and structured interview schedule. The data collection tools were validated and reliability was established. After two weeks of pilot study, then data collection for main study was conducted.

Pre test consist of collecting the demographic variables, clinical variables and the level of knowledge on prevention of peripheral vascular disease was assessed by structured interview questionnaire among diabetic patients. The video assisted teaching program on prevention of peripheral vascular disease was provided to the group for 16 minutes. Then the post test level of knowledge was assessed after 4 days. The data obtained was analyzed using descriptive and inferential statistics.

Major Findings of the Study were

- Most of the diabetic patients were above 40 years old (52%), were males (66%), belonged the religion Hindu (84%), with a school level education (60%), from nuclear family (66%) and had a monthly income of 10,000-20,000 (60%). Significant percentage of them were self employed (38%)
- Majority of the diabetic patients had diabetes mellitus since 11 – 15 years (84%) and 72% of the patients were on regular treatment. Significant percentages of the patients were hypertensive since 11 – 15 years (48%). Most of them were from a family history of peripheral vascular diseases

(64%) and amputation (66%). 64% of patients were smokers, and out of them 62% were attempted to quit smoking.

- Majority of the diabetic patients had poor knowledge before intervention (70%) and most of them had good knowledge (68%) after intervention. This shows that video assisted teaching program on prevention of peripheral vascular disease was effective in improving the knowledge of diabetic patients.
- The mean score of diabetic patients is high in post test (M=19.16, SD=3.66) in comparison with pre test (M=11.66, SD=4.39) which is statistically proven to be significant at $P<0.001$, thus the null hypothesis H_01 with regard to “there will be no significant difference between the pre test and post test level of knowledge scores on prevention of peripheral vascular disease among diabetic patients” was rejected.
- Demographic variables like age ($\chi^2 = 6.01$, $df=1$, $\chi^2 = 4.98$), education ($\chi^2=9.53$, $df=3$, $\chi^2=8.59$), monthly income ($\chi^2=5.09$, $df=1$, $\chi^2=4.77$ at $P<0.05$) had significant association with level of knowledge on prevention of peripheral vascular disease before and after video assisted teaching program at $P<0.05$ level respectively. Hence null hypothesis H_02 with regard to “there will be no significant association between the selected demographic variables of diabetic patients and their pre test and post test level of knowledge regarding prevention of peripheral vascular disease” was rejected. Other variables like gender, occupation, religion, marital status and type of family had no significant association with level of knowledge on prevention of peripheral vascular disease before after video

assisted teaching program. Hence null hypothesis Ho2 with regard to “there will be no significant association between the selected demographic variables of diabetic patients and their pre test and post test level of knowledge regarding prevention of peripheral vascular disease” was retained.

- There was a significant association between the duration of diabetes mellitus ($\chi^2 = 4.08$, $df=1$, $\chi^2 = 4.36$), treatment for diabetes mellitus ($\chi^2=4.02$, $df=1$, $\chi^2=5.05$) and habit of smoking ($\chi^2=5.63$, $df=1$, $\chi^2=4.43$) and the level of knowledge on prevention of peripheral vascular disease at $P<0.05$ level. Hence the null hypothesis Ho3 with regard to “there will be no significant association between the selected clinical variables of diabetic patients and their pre test and post test level of knowledge regarding prevention of peripheral vascular disease” was rejected. However there was no significant association between other variables such as duration of hypertension, action to quit smoking and family history of peripheral vascular disease and amputation and the level of knowledge on prevention of peripheral vascular disease. Hence the null hypothesis Ho3 with regard to “there will be no significant association between the selected clinical variables of diabetic patients and their pre test and post test level of knowledge regarding prevention of peripheral vascular disease” was retained.

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CHAPTER 1

INTRODUCTION

Background of the Study

“Treatment without prevention is simply unsustainable”

-Bill Gates

The intersection between health and lifestyle has achieved increased invisibility in both anthropology and biomedical sciences. In the last two decades, changing life styles have been linked worldwide to changes in patterns of morbidity and mortality. Solving the primary physiological causes of illness and disease may be easier than adequately addressing these lifestyle changes.

In 2002, the World Health Organization revealed that alcoholism, smoking, low consumption of fruit and vegetables and lack of physical activity were associated with about 29 per cent of the chronic health problems. These behaviours are also linked to high cholesterol and obesity, which were associated with a further 15 per cent of the disease burden which include cardiac and vascular disorders.

Case control studies indicated that high blood pressure, tobacco use, high low density lipoprotein cholesterol, low high density lipoprotein cholesterol, obesity with high waist hip ratio, diabetes mellitus, sedentary lifestyles, low consumption of vegetables and psychosocial stress are the most important determinants of cardiovascular disease. Peripheral vascular disease is one among these disorders.

Peripheral vascular disease causes chronic, progressive narrowing of arterial vessels that lead to obstruction. It usually affects the lower extremities. Peripheral vascular disease is increasingly common and has the potential to cause loss of limb or, occasionally life. It is a silent killer disease. The term peripheral vascular disease can include any disorder that affects any of the blood vessels. Rates of peripheral vascular disease are strongly associated with older age.

The worldwide prevalence of lower extremity peripheral vascular disease is between 3 to 12 percent. In 2010, 202 million people around the world were living with peripheral vascular disease. The prevalence rates of peripheral vascular disease in India is 3.2%. Known diabetic subjects had a higher prevalence of peripheral vascular disease (7.8%) compared with newly diagnosed diabetic subjects (3.5%).

Factors that increase the risk of developing peripheral vascular disease include: smoking, diabetes mellitus, hypertension, hyperlipidemia, obesity increasing age, especially after reaching 50 years of age, a family history of peripheral vascular disease, heart disease or stroke. People who smoke or have diabetes have the greatest risk of developing peripheral vascular disease due to reduced blood flow.

Symptomatic peripheral vascular disease carries at least a 30% risk of death within five years and almost 50% within 10 years, primarily due to myocardial infarction (60%) or stroke (12%). Asymptomatic patients have a twofold to fivefold increased risk of fatal or non-fatal cardiovascular events. The prevalence of peripheral artery disease is steadily increasing and is associated with significant morbidity, including a significant percentage of amputation and take

great toll in terms of quality of life. Peripheral artery disease often goes undiagnosed, making its prevention increasingly important. Patients with peripheral arterial disease are at increased risk of adverse cardiovascular outcomes which makes prevention even more important.

If right treatment not given at a right time it may lead to poor physical and mental functioning, coronary artery disease, acute occlusion, advanced stage of occlusion leads to amputation of limb because of lack of blood supply to the limb. Peripheral vascular disease can be prevented by the same preventative measures that help prevent coronary heart disease, exercise regularly, maintain a healthy weight, quitting smoking, maintain a normal blood pressure, maintain normal blood sugar and cholesterol levels, eat a diet low in fat and refined sugar, and high in complex carbohydrates and fibre, caring of feet.

Maintaining a healthy lifestyle requires persistence and dedication, but not without reward. Regular exercise, not smoking, limited alcohol consumption, adequate sleep and a balanced diet are all aspects of a healthy lifestyle. These choices can improve your health in nearly every regard, with benefits extending past the widely known lower risk of disease. Early detection of the condition could lead to treatment that offers the potential to reduce the incidence of fatal as well as to also improve the quality of life.

The felt need by the researcher is to improve the knowledge of the old diabetic patients about prevention of peripheral vascular disease. Hence it is a nursing concern towards diabetic patients who is a smoker and having hypertension, to make them understand the benefits of early prevention for peripheral vascular disease. Risk factors such as smoking, hypertension associated

with diabetes will have a great toll in the life of a diabetic patient. Detailed education regarding the life style modification will make a vital change in each of the patient's health.

Need for the Study

Peripheral vascular disease affects larger portion of the population. It is major cause of morbidity and mortality and its burden are increasing worldwide. Despite, this many people are unaware of this condition. Health promotion enables people to make choices in lifestyle which will help to prevent or reduce disease and enhance quality of life.

Data from the Global Registry of Acute Coronary Events (GRACE) showed an increase of in-hospital mortality from 4.5 to 7.2% in patients with lower extremity peripheral vascular disease. Other studies showed that patients having an acute coronary event with combined peripheral vascular disease have an increased risk for a trial fibrillation, heart failure, recurrent ischaemia, and requirement of blood transfusions.

The number of people with peripheral vascular disease is on the rise, according to a study published in the lancet. Researchers from the UK and US have revealed that the number of people with peripheral artery disease worldwide has risen by 23.5% in the past 10 years, from 164 million in 2000, to 202 million in 2010.

Peripheral vascular disease has become a global problem in the 21st century and can no longer be regarded as a disease that affects mostly high-income countries. The dramatic growth in peripheral vascular disease is already a

major public health challenge due to loss of mobility, diminished quality of life, and the significantly increased risk of myocardial infarction and cerebro vascular diseases.

According to the screening programme for vascular disease in India one in every 20 Indians over the age of 40 has peripheral arterial disease and it is estimated to affect more than 9 million people in India. Individuals with peripheral arterial disease suffer a five-fold increased relative risk of a cardiovascular ischemic event and total mortality that is two to three folds greater than those without peripheral arterial disease. The estimated number of asymptomatic individuals varies widely from 20% to 50%.

Peripheral vascular disease with intermittent claudication is often undiagnosed and, in turn, undertreated. The low percentage of diagnosis ($\approx 30\%$) in this setting of peripheral vascular disease is of particular concern because of the potential worsening of peripheral vascular disease and the high risk of adverse vascular outcomes (vascular death, coronary artery disease, stroke).

Risk factors which developing peripheral vascular disease include: smoking, diabetes, hypertension, hyperlipidemia, obesity increasing age, especially after reaching 50 years of age, a family history of peripheral vascular disease, heart disease or stroke.

In people with diabetes, the risk of peripheral vascular disease is increased by age, duration of diabetes, and presence of peripheral neuropathy. It is important to note that diabetes is most strongly associated with femoral popliteal and tibial (below the knee) peripheral vascular disease, whereas other risk factors (e.g.,

smoking and hypertension) are associated with more proximal disease in the aorto-ilio-femoral vessels.

Diabetes mellitus affects more than 62 million Indians, which is more than 7.1% of India's Adult Population. An estimate shows that nearly 1 million Indians die due to diabetes mellitus every year. The average age on onset is 42.5 years. The high incidence is attributed to a combination of genetic susceptibility and adoption of a high-calorie, low-activity lifestyle by India's growing middle class. Additionally, a study by the American Diabetes Association (2009) reports that India will see the greatest increase in people diagnosed with diabetes by 2030.

As per WHO (2011) smoking is estimated to cause 10 percent cardiovascular diseases. Almost 6 million people die due to tobacco use every year, both from active and passive smoking. By 2020, this number will increase to 7.5 million, which could account for about 10% global deaths. The highest incidence of smoking among men is present in the lower and middle-income generating countries.

A number of studies from different countries have reported reduced cardiovascular disease rates among those who regularly consumed mild to moderate amounts of alcohol as compared to those who remained abstinent from alcohol. In contrast, various studies have reported that heavy consumption of alcohol promotes the progression of atherosclerosis.

High blood pressure is estimated to cause 7.5 million deaths, which accounts for 13% of total deaths. It is a major risk factor for cardiovascular disease. The prevalence of increased blood pressure is similar in all income

groups, although it is generally lowest in high-income populations. High cholesterol increases the risk of heart disease and estimated to cause 2.6 million deaths every year.

Approximately 3.2 million people die due to physical inactivity. People who are physically inactive have an increased risk of mortality ranging in between 20% to 30%. Regular physical activity reduces the risk factors of cardiovascular disease including diabetes and high blood pressure.

Taking action to control the above mentioned risk factors can help prevent or delay peripheral vascular disease. There are several helpful lifestyle changes which include quit smoking, eat a healthy diet, intake of foods that are low in total fat, sugar, saturated fat, cholesterol, and sodium, get regular exercise and physical activity. These lifestyle changes can reduce your risk for peripheral vascular disease and its complications. They can also help prevent and control conditions such as diabetes mellitus and hypertension that can lead to peripheral vascular disease.

The nurse plays a vital role in teaching the adults patients to adopt a healthy life style , which may be considered under following headings, do not smoke, eat nutritious foods, avoid foods high in cholesterol, maintain a healthy weight, engage in moderately strenuous physical activity for at least 30 minutes a day. At least walk briskly for 20-30 minutes daily, control high blood pressure.

Patients who smoke should quit, and everyone should avoid second-hand smoke. Smoking is one of the primary risk factors for peripheral vascular disease and a major cause of complications. Quitting smoking may not make leg pain go

away, at least not in the short term, but it certainly may keep blockages from getting worse. Continued smoking is associated with the majority of patients who progress from milder forms of peripheral vascular disease to critical limb ischemia involving severe pain, skin ulcers, and possible amputation. Smoking cessation also reduces the risk to the heart and blood vessels.

Supervised exercise programs have been recommended as first line therapy for treatment of claudication. Recent evidence demonstrates benefits of exercise training even among those patients with peripheral vascular disease who do not have claudication. Exercise programs combined with risk factor modification offer the possibility of altering the clinical trajectory of peripheral vascular disease.

The purpose of the present study is to identify the effectiveness of a video assisted teaching on prevention of peripheral vascular disease among diabetic patients. This video assisted teaching mainly intended to educate the diabetic patients on peripheral vascular disease, causes, risk factors, warning signs, preventive aspects and complications. The researcher strongly believes that, the result of the proposed study can enhance the knowledge on prevention of peripheral vascular disease.

Statement of the Problem

A Pre Experimental Study to Assess the Effectiveness of Video Assisted Teaching Program on Level of Knowledge Regarding Prevention of Peripheral Vascular Disease Among Diabetic Patients admitted in G Kuppuswamy Naidu Memorial Hospital, Coimbatore.

Objectives of the Study

1. To assess the pre test and post test level of knowledge on prevention of peripheral vascular diseases among diabetic patients.
2. To assess the effectiveness of video assisted teaching by comparing the pre test and post test scores of knowledge on prevention of peripheral vascular disease among diabetic patients.
3. To determine the association between the selected demographic variables of diabetic patients and their pre-test and post test scores of knowledge on prevention of peripheral vascular disease.
4. To determine the association between the selected clinical variables of diabetic patients and their pre-test and post test scores of knowledge on prevention of peripheral vascular disease.

Operational Definitions

Effectiveness

In this study, effectiveness refers to the extent to which the video assisted teaching program has improved the knowledge on prevention of peripheral

vascular diseases among diabetic patients by comparing their pre test and post test scores of knowledge.

Video assisted teaching Program

In this study, video assisted teaching refers to the use of video as a medium of providing information to the diabetic patients for 16 minutes regarding prevention of peripheral vascular disease which includes definition of peripheral vascular disease, cause, risk factors, warning symptoms, clinical signs, diagnostic evaluations, preventive measures and its complication.

Knowledge on Prevention

The act of stopping peripheral vascular disease among diabetic patients before it happens by enhancing the awareness regarding prevention of peripheral vascular disease through performing video assisted teaching program.

Peripheral vascular disease

In this study peripheral vascular disease refers to common circulatory problems developed among diabetic patients such as peripheral arterial disease, aneurysms, buerger's disease, raynaud's disease, deep vein thrombosis, chronic venous insufficiency and varicose vein.

Diabetic patients

In this study, diabetic patients refers to adult persons belongs to the age group above 30 years diagnosed with type1 & type 2 diabetes mellitus and admitted in G Kuppuswamy Naidu Memorial Hospital at Coimbatore.

Assumptions

The study assumes that

- Diabetic patients are high risk for developing peripheral vascular diseases
- Unhealthy lifestyle practices such as smoking, alcoholism, inactive, obesity increases the incidence of peripheral vascular diseases.
- Lifestyle modifications such as healthy diet, cessation of smoking and alcoholism, weight reduction and exercises helps to prevent peripheral vascular diseases.
- Awareness regarding the preventive measures of peripheral vascular disease helps the patients to control the risk of developing such diseases.
- Video Assisted Teaching on prevention of peripheral vascular disease helps to create awareness among diabetic patients

Null Hypothesis

Ho1: There will be no significant difference between the pre-test and post-test level of knowledge scores on prevention of peripheral vascular disease among diabetic patients.

Ho2: There will be no significant association between the selected demographic variables of diabetic patients and their pre test and post test level of knowledge regarding prevention of peripheral vascular disease.

Ho3: There will be no significant association between the selected demographic variables of diabetic patients and their pre test and post test level of knowledge regarding prevention of peripheral vascular disease.

Delimitations

The study was limited to

- diabetic patients who are admitted for treatment
- four weeks data collection
- were able to understand Tamil and English

Conceptual framework for the Study

The conceptual framework deals with the interrelated concepts that are assemble together in some rational scheme by virtue to their relevance to common theme (Polit & Beck, 2012). Conceptual framework or a model is made up of concepts which are the mental image of a phenomenon. A model is used to denote symbolic representation of the concepts.

The conceptual framework for this study is based on “Theory of Goal Attainment” by Imogene King. This theory focuses on the relationship between the nurse and the patient. It explains how the nurse patient relationship can influence goals that are set and their level of achievement through transaction process model. The main components of the model are interaction and transactions which are directly observable.

Perception

Perception the process in which data is obtained through the senses and from memory which are organized, interpreted and transformed. It is not observable but, can be inferred. In this study, the researcher perceives that the diabetic patients are at risk of peripheral vascular disease and have lack of

knowledge on prevention of peripheral vascular disease. The diabetic patients have desire to gain more knowledge on prevention of peripheral vascular disease

Judgement

Judgement refers to the evaluation of the perception to make decision and to take action. In this study, Judgment denotes creating awareness, may enhance the knowledge on prevention of peripheral vascular disease.

Action

Action refers to mental or physical activity to be achieved. In this study, action refers to the plan for assessing the knowledge on prevention of peripheral vascular disease. Patients action is that they are inquisitive to learn the facts on prevention of peripheral vascular disease

Communication

Communication is the two way process between the individuals which enables them to set goals .Here, the communication is initiated between the researcher and the diabetic patients to mutually set goal to enhance knowledge on prevention of peripheral vascular disease.

Reaction

Reaction refers to the consequences or results of the action .In this study the reaction is assessing the knowledge on prevention of peripheral vascular disease by structured interview questionnaire.

Interaction

It is defined as the observable verbal and non verbal goal directed behaviour. In this study, the interaction involves the implementation of video assisted teaching on prevention of peripheral vascular disease.

Transaction

Transaction is the process of interaction between two individuals to attain the goal. In this study, transaction is the assessment of enhanced knowledge after the video assisted teaching.

Feedback

Feedback is the return of information about the result of a process or activity. In this study feedback divided as positive and negative. In positive feedback patients gained adequate knowledge on prevention of peripheral vascular disease.

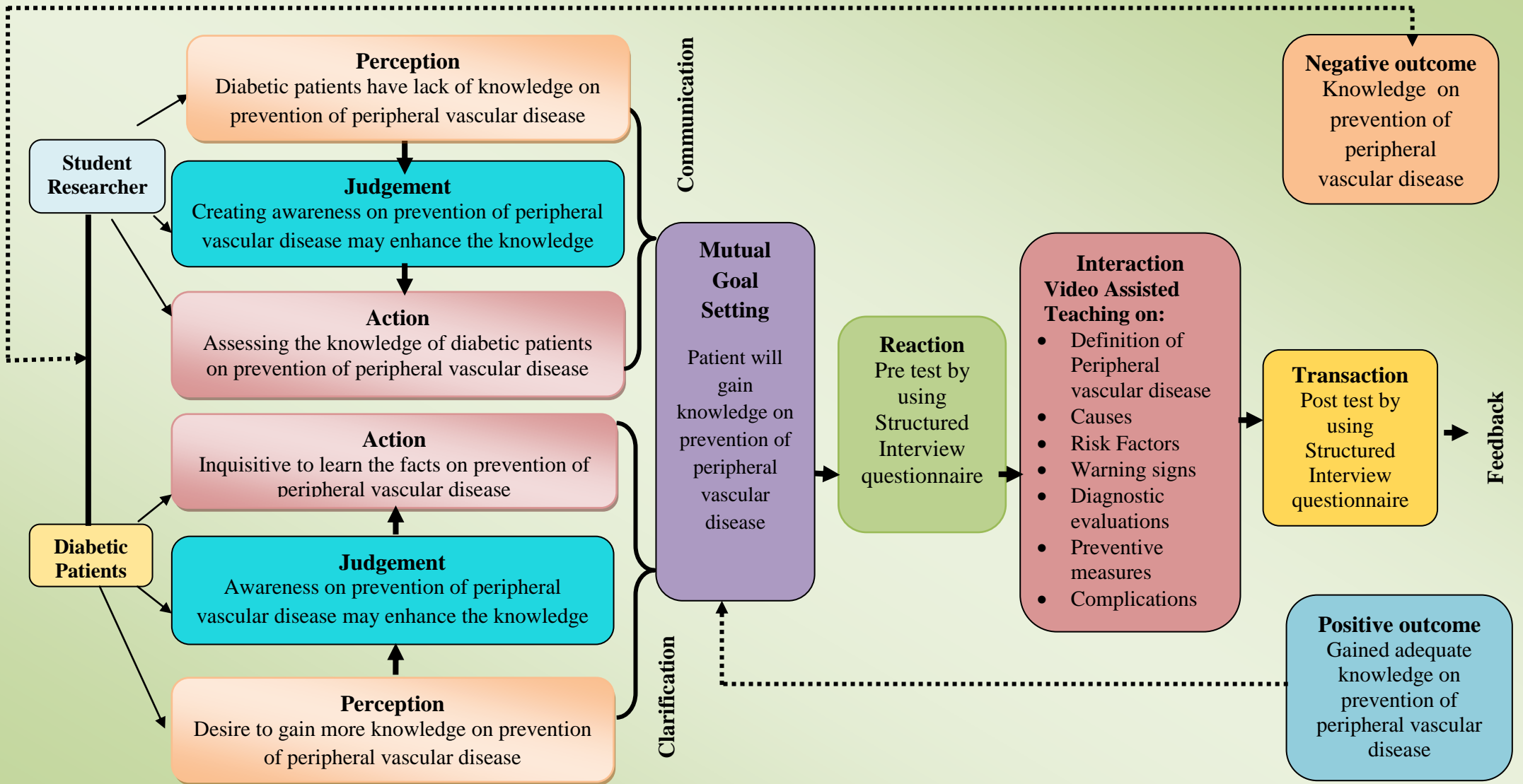


Fig.1.Modified Imogene King Transaction Process Model

Projected Outcome

The study will be helpful in obtaining evidence for the nurse in clinical teaching. In turn will be helpful in preventing peripheral vascular disease.

Summary

This chapter has dealt with the background, need for the study and statement of the problem, objectives, operational definitions, assumptions, hypotheses, delimitations and conceptual framework.

Organization of Report

Further aspect of the study are presented in following five chapters.

CHAPTER – II : Review of Literature

CHAPTER – III : Research methodology includes research approach, research design, setting, populations, sample and sampling techniques, tool description, content validity and reliability of tools, pilot study, data collection procedure and plan for data analysis

CHAPTER – IV : Analysis and interpretation of data

CHAPTER – V : Discussion

CHAPTER – VI : Summary, conclusion, implications, recommendations and limitations

CHAPTER II

REVIEW OF LITERATURE

A review of literature involves the systematic identification, location, scrutiny and summary of written material that contains information on the research problem (Polit & Beck, 2012).

In this chapter an attempt has been made to bring out the available literature which helps in projecting the widened perspective of this study. This chapter deals with a review of published and unpublished research studies and from related material for the present study. The review helped the investigator to develop an insight into the problem area. This helped the investigator in building the foundations of the study. The review of literature of the present study is organised into the following headings:

- Literature related to the Peripheral vascular disease
- Literature related to teaching programme on Prevention of peripheral vascular disease

Literature related to the peripheral vascular disease

A comparative study to assess the prevalence rate of peripheral vascular disease between high income countries and low income countries was conducted in 2013 which included 112,027 participants. They were from 22 high income countries and from 12 low or middle income countries. 9,347 had peripheral vascular diseases. They interpreted that in the 21st century, peripheral artery disease has become a global problem. Governments, non governmental organisations, and the private sector in low income countries need to address the

social and economic consequences, and assess the best strategies for optimum treatment and prevention of this disease (Fowkes et al, 2013).

Okello et al (2013) conducted a cross sectional study to determine the prevalence and correlates of peripheral arterial disease among patients with diabetes at Mbarara referral hospital in South western Uganda. 229 diabetic patients were assessed by Edinburg claudication questionnaire. Logistic regression used to determine the correlates of peripheral arterial disease. It was found that 55 patients had peripheral arterial disease (ankle brachial index < 0.9). They concluded that correlates of peripheral arterial disease include female sex, hypertension and being on a sulfonyl urea.

A hundred and eighty two patients were admitted in the cardiology and medicine wards in a tertiary institute between october 2004 and march 2005 were taken as study samples by Sarangi et al (2012). Based on ankle brachial index, peripheral arterial disease was diagnosed in 32 patients and 150 patients had ankle brachial index < 0.9 . The overall occurrence of intermittent claudication in the study population was 3.8%. However among peripheral arterial disease positive cases, coronary artery disease was present in 46.88%. Only 20% of peripheral arterial disease negative cases had coronary artery disease. A strong correlation was found between peripheral arterial disease and coronary artery disease.

In a rural tertiary medical outpatient department at Tamil Nadu, they selected 100 type 2 diabetic women. As per the data collected, they concluded that there is an association of asymptomatic peripheral arterial disease in diabetics without clinical cardiovascular disease or cerebro vascular disease in south Indian women. In addition to this they suggested that a number of conditions associated

with diabetes such as low high density lipoprotein, high triglyceride, high low density lipoprotein, metabolic syndrome, are associated with high incidence of low ankle brachial index and peripheral arterial disease (Binu et al, 2011).

The Edinburgh artery Study demonstrated that 28.8% of intermittent claudication patients still had pain after 5 years, 8.2% had undergone a vascular surgical revascularization or amputation and that 1.4% developed leg ulceration. Although peripheral arterial disease progression is usually slow and the risk of limb loss is low, approximately 20-25% of symptomatic peripheral arterial disease patients will die from coronary or cerebrovascular events within 5 years (Donnell et al, 2011).

A cross sectional study was conducted to know the prevalence and associated risk factors of peripheral arterial disease in the general population. In randomly selected in 28 primary care centres in Barcelona (Spain). Peripheral arterial disease was evaluated using the ankle arm index. Values < 0.9 were considered as peripheral arterial disease. The prevalence of peripheral arterial disease is low, higher in males and increases with age in both sexes (Alzamora , 2010).

In 2009 a study was conducted on possible factors predisposing to peripheral arterial disease in hypertensive subjects with type 2 diabetes mellitus were studied. Details of age, sex, duration of diabetes, blood pressure, and smoking habit were recorded in 180 subjects of White, West Indian Black or Asian ethnic origin. Peripheral vascular disease was defined as an ankle brachial systolic pressure < 0.9 as measured by the Doppler technique. They concluded

that hypertension and dyslipidaemia are important risk factors for peripheral arterial disease in Type 2 diabetes mellitus (Ado et al, 2009).

A longitudinal study was conducted on the incidence of asymptomatic peripheral arterial occlusive disease was higher than the incidence of symptomatic peripheral arterial occlusive disease, with women developing peripheral arterial occlusive disease more often than men. Multivariate analyses showed that increasing age, smoking, hypertension, and diabetes mellitus were the most important risk factors (Hooi et al, 2007).

Hernando et al (2007) conducted a study in which they did a comparison of patients with peripheral arterial disease versus age-matched controls shows an incidence of cardiovascular death of 0.5% in controls and 2.5% in the patients with peripheral arterial disease. Additionally, in persons with known coronary artery disease, the presence of peripheral arterial disease raises the risk of death by 25% in comparison with controls. It is thus important to examine for peripheral arterial disease, even in asymptomatic patients, in order to control the risk factors as soon as possible and reduce mortality.

An epidemiologic evidence confirms an association between diabetes mellitus and an increased prevalence of peripheral arterial disease. Individuals with diabetes have a two to fourfold increase incidence rate of peripheral arterial disease as well as an increased incidence of femoral bruits and absent pedal pulses, and many have abnormal rates of ankle-brachial indices ranging from 11.9 to 16%. The duration and severity of diabetes correlate with the incidence and extent of peripheral arterial disease. In type 2 diabetes, an average interval of

arterial impairment is 9 to 10 years, in type 1 diabetes, it is approximately 17 to 22 years (Mowla, 2006).

Norman et al (2006) conducted a study in which the prevalence of peripheral arterial disease at study entry was 13.6% and the incidence of new peripheral arterial disease was 3.7 per 100 patient years. Both prevalent and incident of peripheral arterial disease was strongly and independently associated with increasing age, systolic blood pressure, total serum cholesterol, and especially smoking. Risk factor management improved but remained suboptimal during follow-up. An ABI of <0.90 was independently associated with an increased risk of cardiac death of 67%.

A comparative study was conducted between diabetic and non diabetic patients to compare the severity and outcome between both groups of patients about risk of peripheral arterial disease. This study has confirmed that diabetic patients have worse peripheral arterial disease below the knee and are at higher risk of lower extremity amputation than non diabetic patients (Jude et al, 2004).

The researchers concluded that the overall prevalence of peripheral arterial disease can be estimated from several population studies that used objective, non invasive limb pressure testing results as diagnostic criteria. The incidence and prevalence of peripheral arterial disease increase with age, with estimated prevalence rates of 3% among those 40-59 years of age, 8% in those 60-69 years of age, and 19% in those over age 70 years (Dawson et al, 2002).

Literature related to teaching programme on prevention of peripheral vascular disease

Mohamad et al (2013) suggests millions of US adults with peripheral arterial disease are not receiving secondary prevention therapies. Out of 7458 eligible participants aged 40 years or older, weighted peripheral arterial disease prevalence was $5.9 \pm 0.3\%$, corresponding to approximately 7.1 million US adults with peripheral arterial disease. Secondary prevention relies on early detection of disease process and application of interventions to prevent progression of disease.

A prospective survey of awareness related to peripheral vascular disease among patients attending a tertiary vascular clinic for management of peripheral vascular disease was undertaken. There was a 100% response rate, with 97 participants (53 male). Seventeen patients (19%) reported an interval of greater than six months from the onset of symptoms to first seeking medical attention with their general practitioner. Only 19 (20%) could correctly identify 3 or more risk factors for peripheral vascular disease. Patients have limited awareness of peripheral vascular disease and its consequences. Educational initiatives are needed to encourage patients to seek early medical attention and raise awareness of modifiable risk factors in the community (Owens et al, 2013).

The purpose of this quasi experimental, study is to evaluate the knowledge that diabetic patients have about their disease before and after implementing a diabetes education program. 54 diabetic patients participated in the study. Data collection was performed using a questionnaire. The patients' knowledge regarding their disease increased significant at $P < 0.05$; especially considering the

general topics concerning diabetes mellitus, concept of the disease, physiopathology and treatments (Otero et al, 2008).

The Styrian diabetes type 2 education project is a combined intervention consisting of a structured diabetic teaching and treatment programme and a special training for educating staff. During 4 project years, 120 physicians and 52 diabetes educators taught the diabetic teaching and treatment programme course to 4,396 patients with type 2 diabetes. The researchers concluded that a teaching and treatment program for patients with type 2 diabetes can successfully be implemented throughout the area at the primary health care level (Korsatko et al, 2007).

A cohort study was conducted on patient awareness of the risk factors that predispose to peripheral arterial disease, before and after consultation with a vascular specialist. Of 102 patients recruited, 52 were interviewed prior to specialist vascular assessment and 50 after such an assessment. 79% of patients knew that they had peripheral arterial disease, before assessment and 96% knew that they had peripheral vascular disease after specialist assessment. Overall, 60% of patients acknowledged that they received advice about vascular risk factors and 33% recalled receiving such advice from their general practitioner. This study demonstrates that patient awareness of vascular risk factors is generally low and further work is required to establish means for vascular disease awareness to improve education for patients about Peripheral arterial disease (Muthu et al, 2007).

Watson et al (2006) conducted a study in which they emphasised that peripheral arterial disease is associated with an increased risk of cardiovascular

and cerebro vascular disease as well as a reduction in quality of life. Peripheral arterial disease symptoms are not always present with the disease; therefore, improvements in screening methods for at risk patients are necessary. Patients at risk for peripheral arterial disease should be routinely screened, and appropriate management including antiplatelet therapy and risk factor modifications should be initiated once the disease is recognized. Risk factor modifications should include smoking cessation as well as blood pressure and cholesterol management.

Peripheral arterial disease is a common, progressive manifestation of athero thrombotic vascular disease, which should be managed no different to cardiac disease. Indeed, there is growing evidence that peripheral arterial disease patients are a high risk group, although still relatively under detected and under treated. This is despite the fact that peripheral arterial disease patients are an increased mortality rate comparable to those with pre-existing or established cardiovascular disease. With a holistic approach to atherothrombotic vascular disease, our management of peripheral arterial disease can only get better (Tomson, 2005).

This study evaluated the impact of a nurse led health education programme on the behaviour, nicotine dependence and nicotine withdrawal in patients who smoke and suffer from peripheral vascular disease, based in a large teaching hospital in the North of England. Smoking behaviour was measured by self report, end expired carbon monoxide and urinary cotinine. Nicotine dependence and withdrawal were measured using a nicotine dependence scale and a nicotine withdrawal scale. The findings demonstrated that the programme did have some impact on behaviour (Galvin et al, 2001).

Video is a good and effective method of patient education in enhancing short-term knowledge. There is no advantage in promoting compliance along with medical regimen and in improving the long term knowledge. The strength of a video is role-modelling. Role-modelling in video decreases the patients' pain, anxiety, and sympathetic arousal in knowledge, coping ability and cooperation. When applied in well-defined, self-limited and in stressful situations.

Summary

This chapter deals with the review of literature related to the problem stated. It also enabled the researcher to design the study, develop the tool and plan the data collection procedure to analyze the data. Twenty two studies were reviewed from twenty primary sources and from two secondary sources.

CHAPTER III

RESEARCH METHODOLOGY

The methodology of the research study is defined as the way the data are gathered in order to answer the question and to analyze the research problem. It enables the researcher to project a blueprint of the research undertaken. The research methodology involves the systematic procedure by which the researcher starts from the time of initial identification of the problem to its final conclusion.

This chapter deals with a brief description of different steps undertaken by the researcher for the study. It involves research approach, research design, setting, population, sample and sampling technique, sampling criteria, selection and development of the instruments, validity and reliability of the instruments, pilot study data collection procedure and plan for data analysis. The present study is conducted to assess the effectiveness of video assisted teaching program on prevention of peripheral vascular disease among diabetic patients.

Research Approach

Research approach is the most significant part of any research. The appropriate choice of the research approach depends on the purpose of the research study which was undertaken.

In this study as the investigator wants to assess the effectiveness of video assisted teaching program on prevention of peripheral vascular disease among diabetic patients. Quantitative research approach was selected.

Research Design

The research design is the plan, structure and strategy of investigations answering the research question. It is the overall blue print for the researchers to select and carry out the study. A research design incorporated the most important methodological design that a researcher works in conducting a research study (Polit & Beck 2012). It helps the investigator in the selection of the subjects, observation, type of statistical method to be used to interpret the data.

One group pre test post test pre experimental design was selected for this study

$$O_1 \quad X \quad O_2$$

O_1 = Pre test

X = Video Assisted Teaching Program on Prevention of Peripheral
Vascular Disease

O_2 = Post test

Pre test consist of collecting the demographic variables, clinical variables and the level of knowledge on prevention of peripheral vascular disease was assessed by structured interview questionnaire among diabetic patients. The video assisted teaching program on prevention of peripheral vascular disease was provided to the group for 16 minutes. Then the post test level of knowledge was assessed after 4 days.

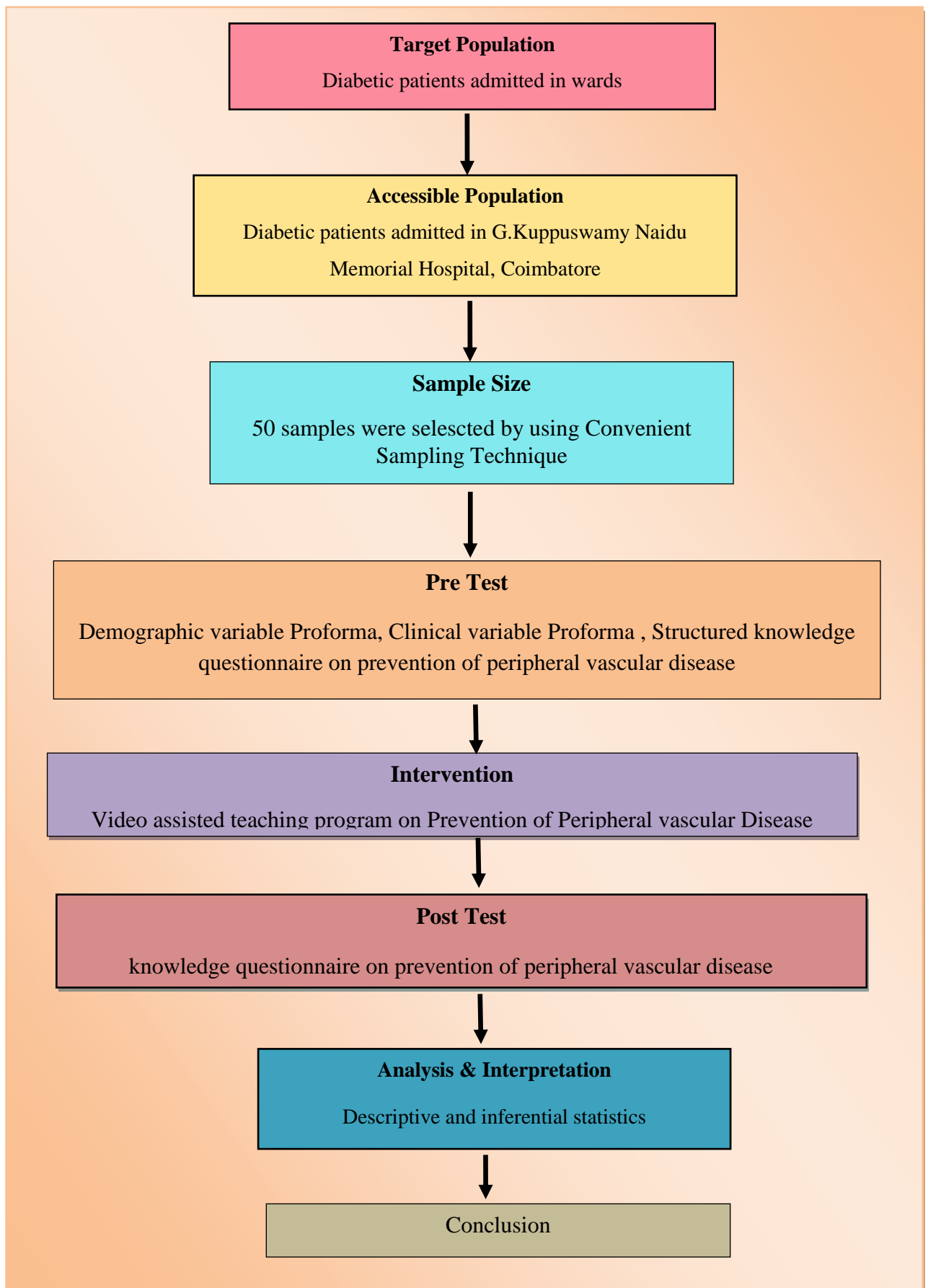


Fig.2.Schematic design of the Study Research

Variables

Independent variable

The variable that is believed to cause or influence the dependent variable is the independent variable (Polit & Beck, 2012).

In this study Video assisted teaching on prevention of peripheral vascular disease was considered as independent variable.

Dependent variable

The variable hypothesized to depend on or be caused by another variable is the dependent variable (Polit and Beck, 2012).

In this study the level of knowledge of diabetic patients on prevention of peripheral vascular disease was consider as a dependent variable.

Attribute Variables

Variables that describes the study sample characteristics are termed as attribute variables (Polit & Beck, 2012).

In this study the attribute variables were demographic variable proforma and clinical variable proforma of diabetic patients.

Research Setting

The physical location and condition in which data collection takes place in a study is the research setting (Polit & Beck, 2012).

The study was conducted in G.Kuppuswamy Naidu memorial Hospital, Coimbatore among those who admitted in cardiac and medicine wards and diagnosed as diabetics. G.Kuppuswamy naidu memorial Hospital is a 560 bedded

multispecialty hospital in Coimbatore. It has developed centre of excellence in cardiac sciences & cancer.

Population

According to (Polit & Beck, 2012) a population is an aggregate of totality of all subjects who possess some common characteristics.

Target population

The entire population is the aggregate of cases in which a researcher is interested and would like to generalize the study results (Polit & Beck , 2012). The target population of the present study was patient with diabetes mellitus who were admitted in wards of G.Kuppuswamy Naidu Memorial hospital.

Accessible Population

The accessible population is the aggregate of cases that conforms to designated criteria that are accessible as subjects for a study (Polit & Beck 2012). In this study the accessible population are the patients who were diagnosed to have diabetes mellitus and admitted in the medicine and cardiac wards of G Kuppuswamy Naidu Hospital, Coimbatore.

Sample

According to (Polit & Beck, 2012) sample is a subset of population, selected to participate in the study. A sample consists of diabetic patients who admitted in the medicine and cardiac wards of G.Kuppuswamy Naidu Memorial Hospital Coimbatore, was selected for the study who meets the inclusion criteria.

Sample Size

In this study the sample size comprises of 50 diabetic patients who attending video assisted teaching programme on prevention of peripheral vascular disease.

Sampling Technique

Sampling is the process of selecting a portion of population to represent the entire population (Polit & Beck, 2012). The subjects of the present study were selected by non probability convenient sampling technique.

Sampling Criteria

Inclusion Criteria

- Who were willing to participate
- Between the age group of 30 – 80yrs
- Who admitted in wards and diagnosed as diabetes mellitus.
- Who understand Tamil or English

Exclusion Criteria

- Who were not willing to participate
- Who were critically ill
- Who don't know English and Tamil
- Who have visual or auditory problems

Selection and Development of Study Instruments

As the study aimed to assess the knowledge regarding prevention of peripheral vascular disease among diabetic patients, the data collection tool was prepared by the investigator after a thorough review of literature and experts suggestion. The instruments used in the study were Demographic variable Proforma, Clinical variable Proforma and Structured questionnaire regarding prevention of peripheral vascular disease.

Demographic Variable Proforma of Diabetic Patients

Demographic variable proforma consists of age, gender, educational qualification, religion, nature of work and family income by interview.

Clinical Variable Proforma of Diabetic patients

Clinical variable proforma consists of duration of diabetes mellitus, treatment of diabetes mellitus, duration of hypertension, habit of smoking, actions to quit smoking, family history of peripheral vascular disease, family history of amputation.

Structured Questionnaire on Knowledge regarding Prevention of Peripheral Vascular Disease

The interview schedule is designed to assess the knowledge regarding prevention of peripheral vascular disease. It consists of 25 questions. It include definition of peripheral vascular disease, causes, risk factors, warning signs, clinical signs, diagnostic evaluations, preventive measures, medical management, and complications.

Score interpretation

Each correct answer was given a score of one and the wrong answer was given a score of zero. The maximum score was 25. The knowledge score was interpreted as follows

Score	Level of Knowledge
20-25	Good
13-19	Average
0-12	Poor

Psychometric Assessment of the Instruments

Validity of the instruments

Content validity is the degree to which an instrument measures what it is intended to measure. Content validity is the sampling adequacy of the content being measured (Polit & Beck, 2012).

Content validity of the tool, was obtained from experts in the field of nursing and medicine. Based on their suggestions the investigator modified the item and finalized the tool for study.

Reliability of instruments

Reliability of instruments refers to the accuracy and consistency of the measuring tool. It refers to the extent to which the same results are obtained on repeated administration of the instrument. The reliability of the tool was determined by the Spearman Brown's Split-Half technique. r value was found reliable ($r = 0.83$).

Intervention Protocol

The intervention was video assisted teaching for diabetic patients regarding prevention of peripheral vascular disease. The video was developed by the researcher .It is a combination of moving slides of pictures with audio. This video was developed in C7 studio, Coimbatore. Duration of this video was 16 minutes with detailed explanation of peripheral vascular disease, its definition, cause and risk factors, signs and symptoms, diagnostic evaluations, complications and prevention strategies. The video assisted teaching program was given from 8 to 5 pm for 5 patients per day, thus for 50 patients within 4 weeks.

Researcher was with the patients throughout the video assisted teaching program. Encouraged the patients to ask doubts and clarified their doubts in the interaction section.

Pilot Study

According to (Polit & Beck, 2012) stated that pilot study is the miniature of actual study, in which the instruments are administered to the subject drawn from the same population. The purpose is to find the feasibility and practicability of the study and to finalize the tools. Tools will be modified as required. Pilot study should be conducted on a sample comprising of atleast 10 % population for the main study.

A pilot study was conducted on 8 patients. The study was conducted after obtaining permission from the authorities of G.Kuppuswamy Naidu Memorial hospital , Coimbatore and written consent from the participants. The samples were chosen by convenient sampling technique. Structured interview questionnaire was

used to assess the pre test knowledge on prevention of peripheral vascular disease and video assisted teaching program on prevention of peripheral vascular disease was provided to the subjects. After 5 days of interval post test done with the same structured knowledge questionnaire. Analysis of the data was done by using paired t test and the results revealed that the study was feasible.

Protection of Human Rights

The study was conducted after the approval of ethical committee of G.Kuppuswamy Naidu Memorial hospital. The researcher also obtained formal permission to conduct the study from Director of Medical superintendent and Nursing Superintendent of G.Kuppuswamy Naidu Memorial hospital, Coimbatore. Written consent was obtained from the participants before collecting the data. Confidentiality was maintained throughout the study.

Data collection procedure

Data collection is gathering information about something which the researcher has chosen to explore or investigate (Polit & Beck, 2012). The data was collected for a period of four week from 05.06.14 to 05.07.14 at G.Kuppuswamy Naidu Memorial hospital, Coimbatore. By using convenient sampling technique, the samples that satisfied the inclusion criteria were selected. After getting the ethical committee clearance the investigator introduced herself to the participants, explained about the research study and obtained informed consent.

The pre test data was collected by using the demographic variable and clinical variable proforma and structured questionnaire regarding prevention of peripheral vascular disease by interviewing the participants and from the records.

After that video assisted teaching on prevention of peripheral vascular disease was provided for the subjects. It is a 16 minutes video which contain in depth knowledge on prevention of peripheral vascular disease. After 5 days of interval post test done with same structures questionnaire.

Problems Faced During Data Collection

- Some participants were not willing to participate in the study due to lack of time.
- Difficult to get cases with in short period of time.

Plan for Data Analysis

Data analysis is the systematic organization, synthesis of research data and testing of hypothesis using those data (Polit & Beck, 2012). Analysis was carried out using descriptive statistics like frequency distribution, percentage, and inferential statistics like paired t test and chi-square test. The research hypothesis were tested and found to be rejected or accepted at level of significance.

Summary

This chapter dealt with the research approach, research design, setting, population, sample, sampling technique, sampling criteria, development of study instruments, reliability and validity of the instruments, pilot study, data collection procedure and plan for data analysis.

CHAPTER IV

ANALYSIS AND INTERPRETATION

The analysis is defined as the method of organizing data in such a way that the research questions can be answered. Interpretation is the process of examining the result and simplification of the findings within a broader context (Polit & Beck, 2012).

This chapter deals with the analysis and interpretation including both descriptive and inferential statistics. Statistics is the field of study concerned with techniques or methods of collection of data, classification, summarization, interpretation, drawing inferences, testing of hypothesis, making recommendations (Mahajan, 2004).

The data was analyzed according to the objectives and hypothesis of the study. Analysis of the study was compiled after all the data was transferred to the master coding sheet. The investigator used descriptive and inferential statistics for analysis. The data were analyzed, tabulated and interpreted using appropriate descriptive and inferential statistics.

Organization of the Findings

The findings of the study were organized and presented under the following headings

- Frequency and percentage distribution of demographic variables of diabetic patients.
- Frequency and percentage distribution of clinical variables of diabetic patients.

- Comparison of mean and standard deviation of knowledge before and after video assisted teaching program on prevention of peripheral vascular disease among diabetic patients.
- Association between the selected demographic variables and the level of knowledge before and after video assisted teaching program on prevention of peripheral vascular disease among diabetic patients.
- Association between the selected clinical variables and the level of knowledge before and after video assisted teaching program on prevention of peripheral vascular disease among diabetic patients.

Table 1

**Frequency and Percentage Distribution of Demographic Variables of
Diabetic Patients**

N=50

Demographic variables	n	p
Age (in years)		
<30	0	0
31-40	24	48
>41	26	52
Education		
Illiterate	4	8
School level	30	60
Under graduate	15	30
Post graduate	1	2
Occupation		
Unemployed	15	30
Self employed	19	38
Private employee	12	24
Government employee	4	8
Marital status		
Single	3	6
Married	47	94

From Table 1 it is inferred that most of the diabetic patients who were admitted belonged to the age group of above 40 years (52%), had school level education (60%). Significant percentages of them were self employed (38%). Majority of them were married (99%).

Fig 3 shows that most of the diabetic patients admitted were males (66%).

Fig 4 depicts that majority of the diabetic patients admitted were Hindus (84%).

Fig 5 suggests that most of the diabetic patients admitted had the monthly income between 10,000- 20,000 (60%).

Fig 6 indicates that most the diabetic patients were living in nuclear families(66%)

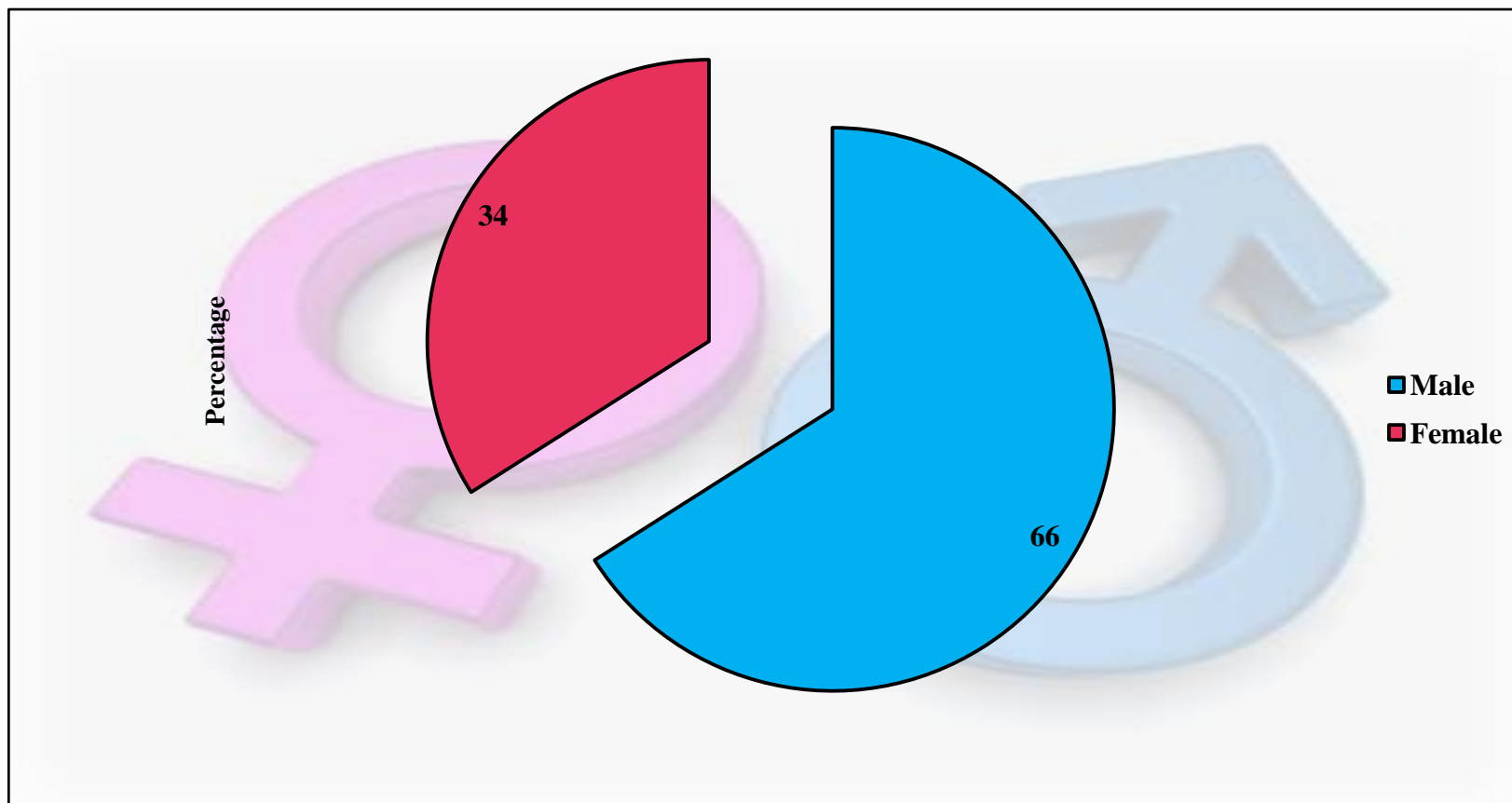


Fig.3.Distribution of Diabetic Patients based on Gender

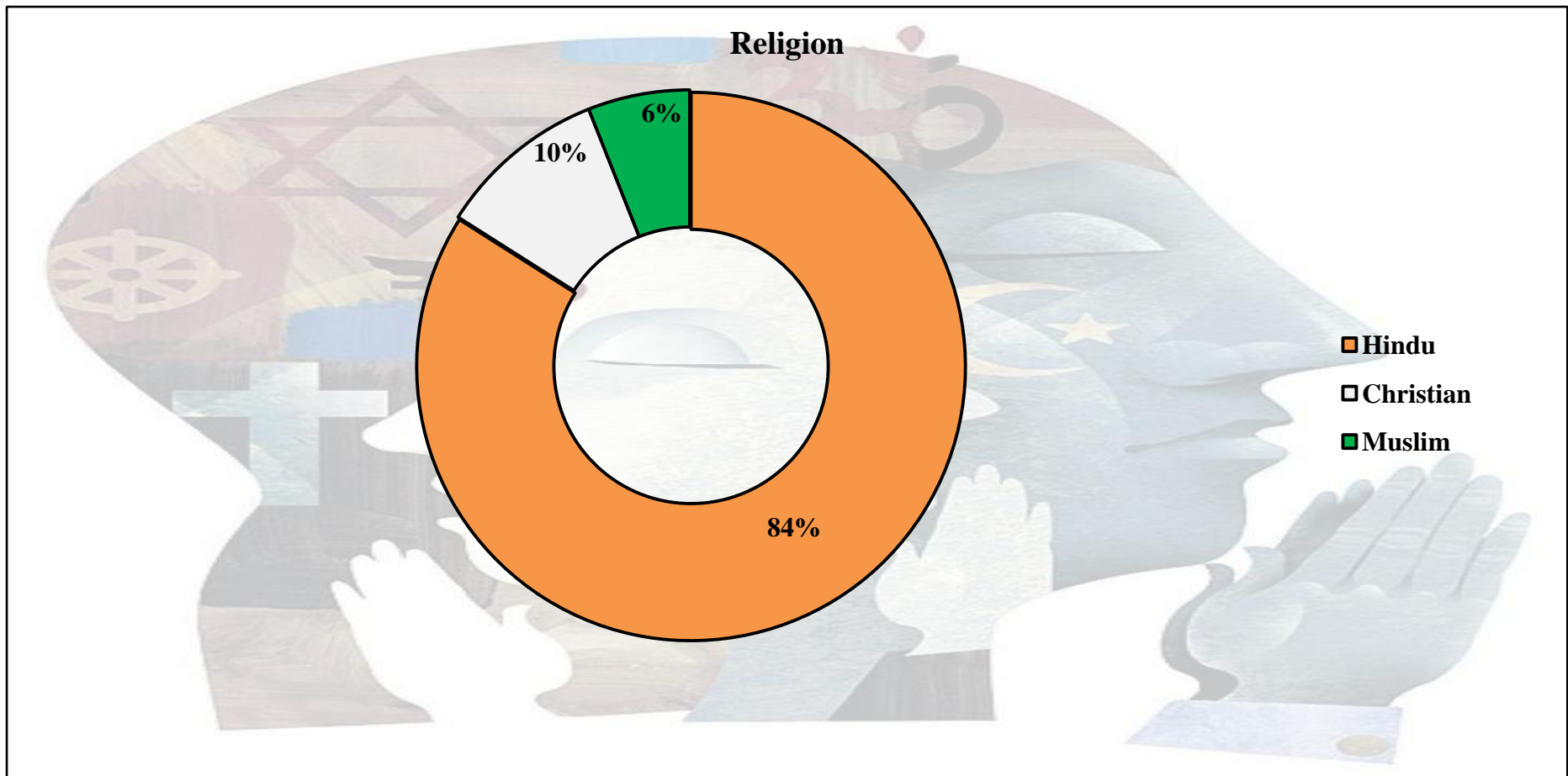


Fig.4.Distribution of Religion of Diabetic Patients based on Religion

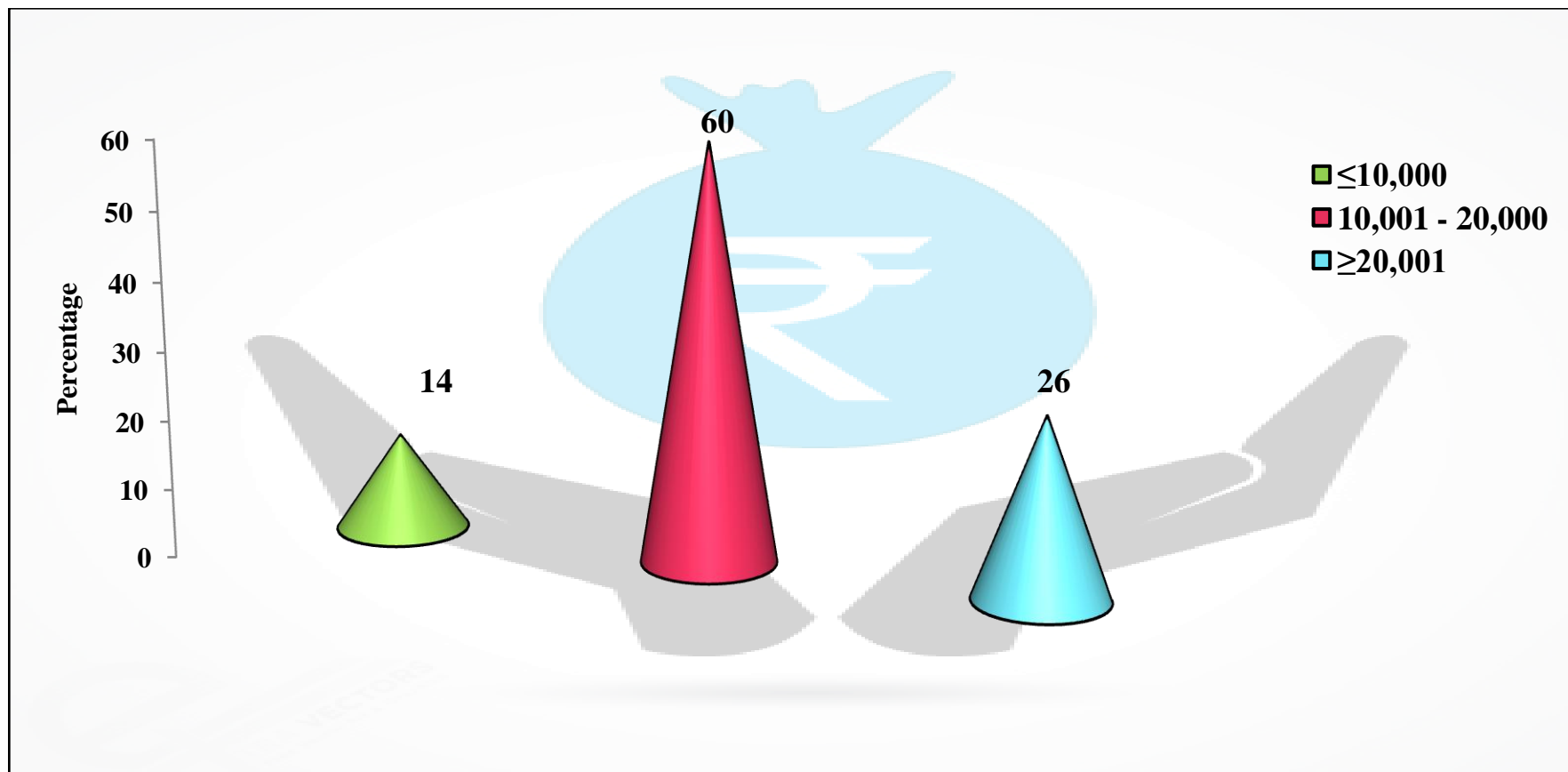


Fig.5.Distribution of Diabetic Patients based on Monthly Income

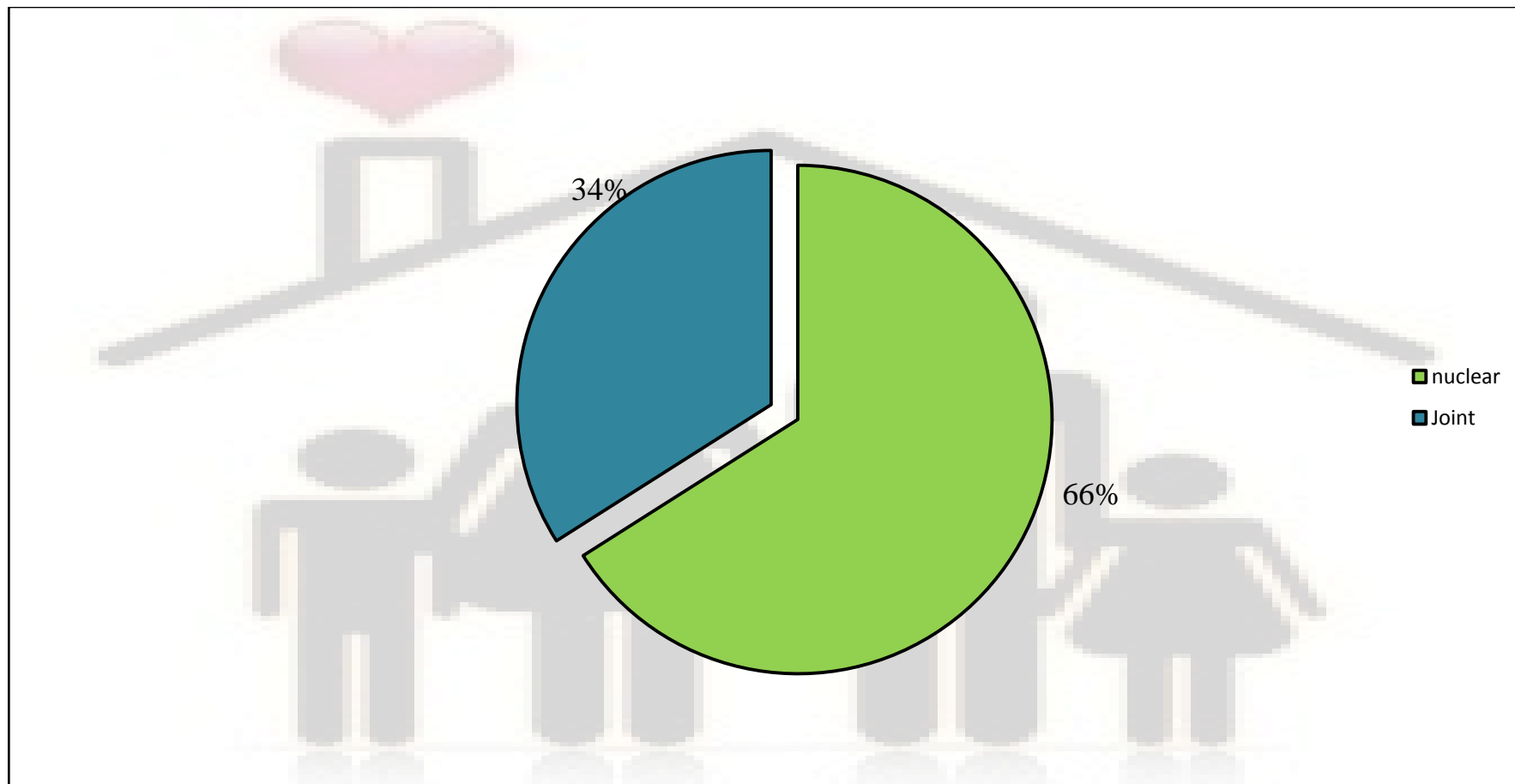


Fig.6. Percentage Distribution of Type of Family of Diabetic Patients

Table 2

Frequency and Percentage Distribution of Clinical Variables of Diabetic Patients

N = 50

Clinical variables	n	p
Duration of Diabetes mellitus (in years)		
≤10	0	0
11-15	42	84
≥15	8	16
Treatment for Diabetes Mellitus		
Yes	36	72
No	14	28
Action to quit Smoking		
Yes	31	62
No	19	38
Family history of Peripheral Vascular Disease		
Yes	18	36
No	32	64
Family history of Amputation		
Yes	17	34
No	33	66

From the table 2 it is found that majority of the diabetic patients had diabetes mellitus since 11 – 15 years (84%) and were on regular treatment (60%). Most of the diabetic patients attempted to quit smoking (62%), and had the family history of peripheral vascular diseases (64%) and amputation (66%).

Fig 7 suggests that significant percentage of the patients were hypertensive since 11- 15 years (48%)

Fig 8 depicts the frequency and percentage distribution of smoking habit of the diabetic patients. Most of the diabetic patients were smokers (64%)

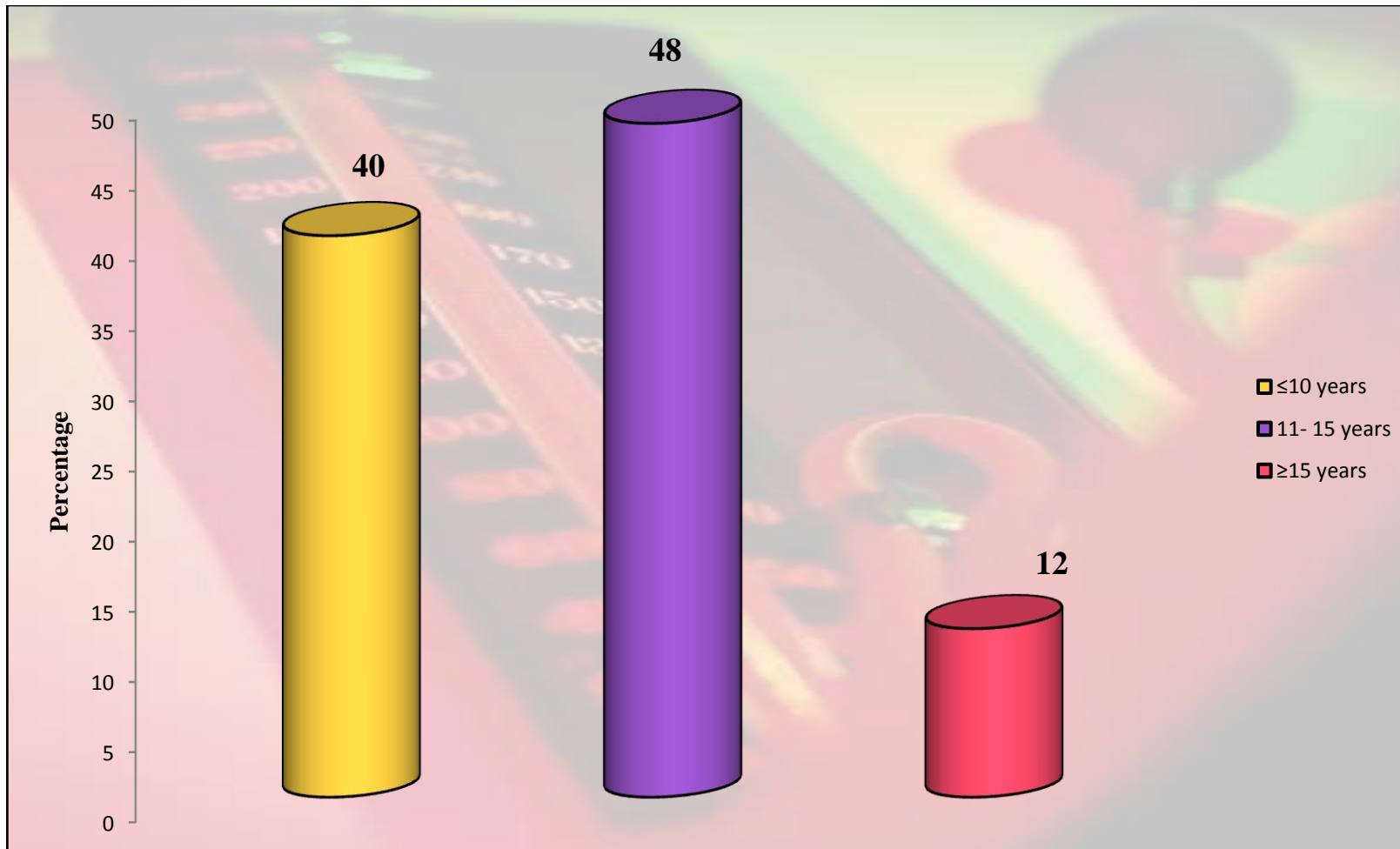


Fig.7. Distribution of Diabetic Patients based on Duration of Hypertension

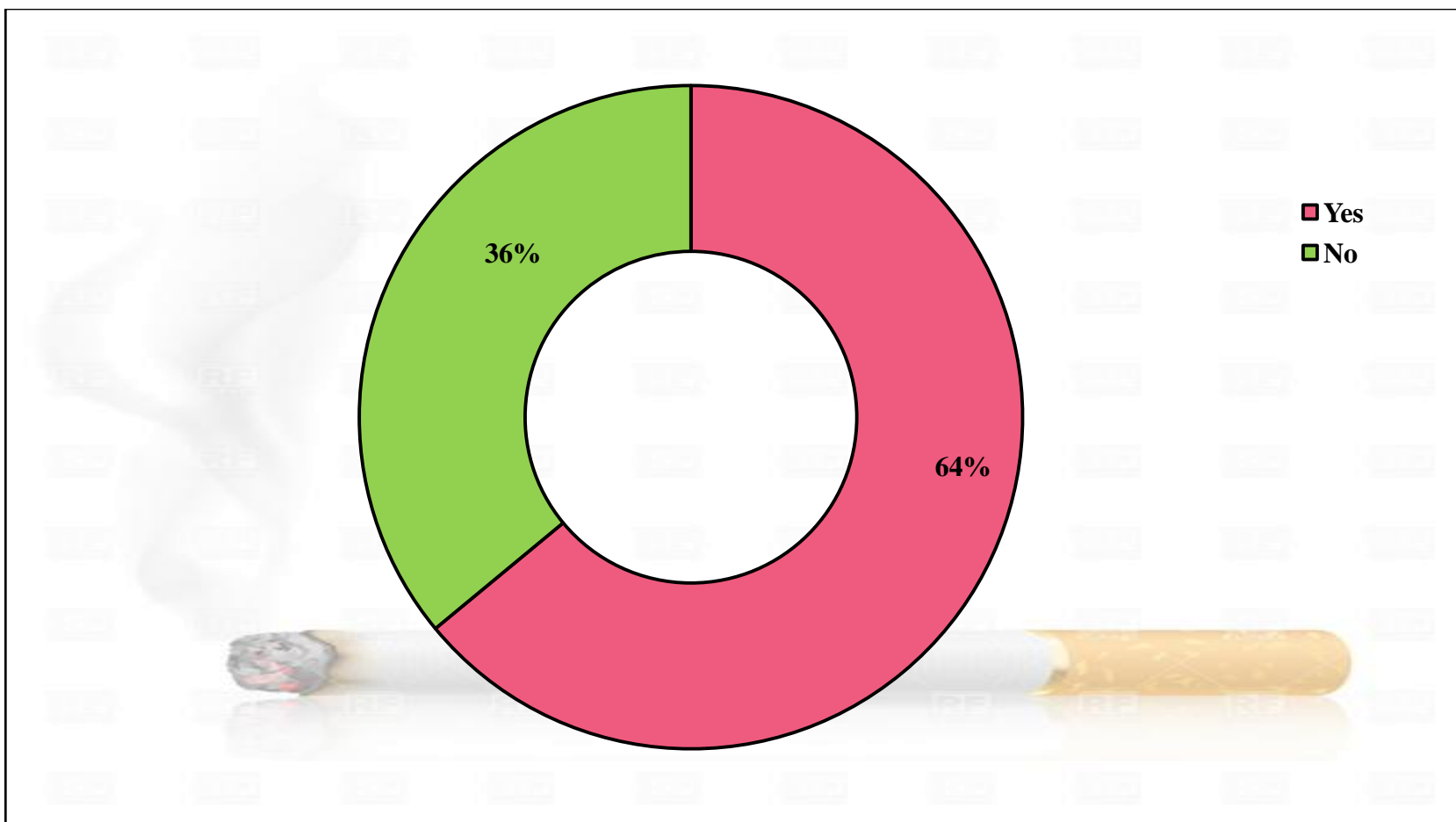


Fig.8.Distribution of Diabetic Patients based on Smoking Habit

Table 3

Frequency and Percentage Distribution of Level of knowledge on Prevention of Peripheral Vascular disease before and after Video Assisted Teaching Program among Diabetic Patients

N = 50

Level of knowledge	Before Video Assisted Teaching		After Video Assisted Teaching	
	n	p	n	p
Good	1	2%	34	68%
Fair	14	28%	16	32%
Poor	35	70%	0	0%

The data presented in table 3 & figure 9 depicts that most of the diabetic patients had poor knowledge on prevention of peripheral vascular disease before intervention (70%) and most of them had good knowledge on prevention of peripheral vascular disease (68%) after intervention

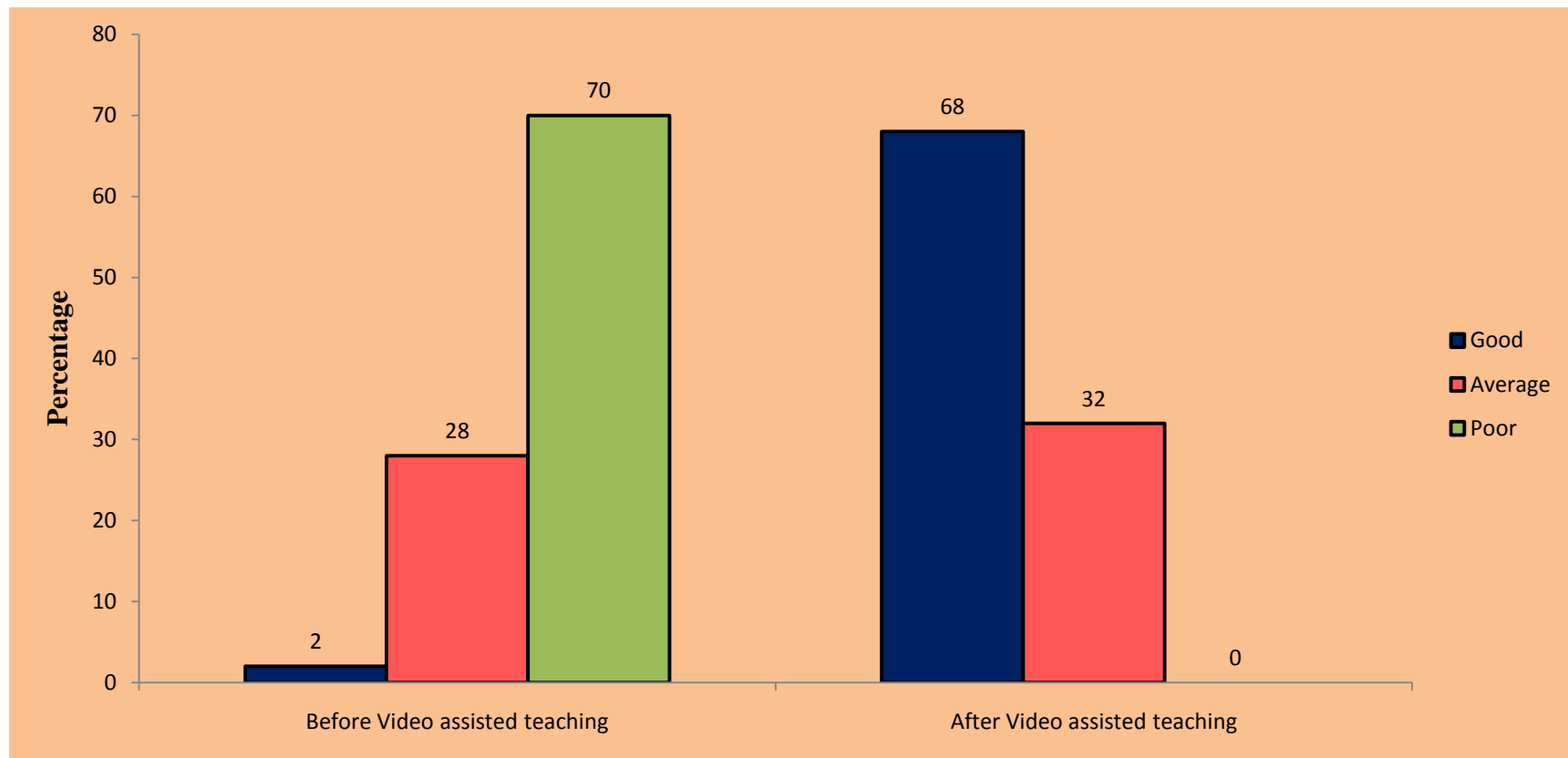


Fig.9. Frequency and Percentage Distribution of Level of knowledge on Prevention of Peripheral Vascular disease Before and After Video Assisted Teaching Program among Diabetic Patients

Table 4

Comparison of Mean and Standard Deviation of Knowledge on Prevention of Peripheral Vascular Disease Before and After Video Assisted Teaching Program among Diabetic Patients.

N = 50

	Mean	SD	't' value
Before Video Assisted Teaching	11.66	4.39	23.89***
After Video Assisted Teaching	19.16	3.66	

*****P< 0.001**

From Table 4 & figure 10 it is inferred that the mean score of diabetic patients is high in post test (M=19.16, SD=3.66) in comparison with pre test (M=11.66, SD=4.39). There is a significant difference between the pre test and post test level of knowledge scores on prevention of peripheral vascular disease among diabetic patients at P<0.001 level. Hence null hypothesis Ho1 with regard to “there will be no significant difference between the pre test and post test level of knowledge scores on prevention of peripheral vascular disease among diabetic patients” was rejected.

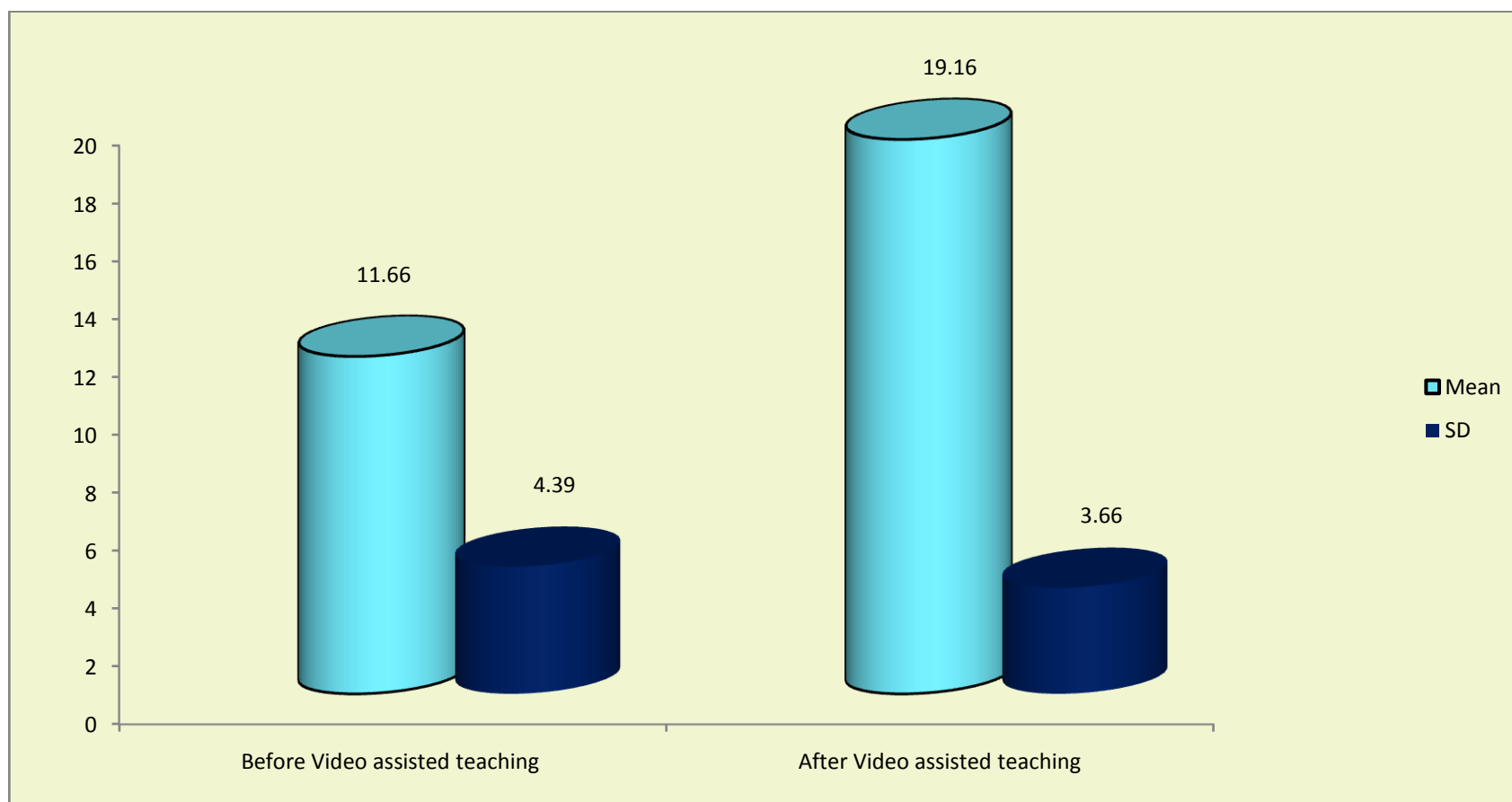


Fig.10. Comparison of Mean and Standard Deviation of Knowledge on Prevention of Peripheral Vascular Disease before and after Video Assisted Teaching Program among Diabetic Patients.

Table 5

Association between the Selected Demographic Variables and the Level of Knowledge on Prevention of Peripheral vascular Disease before and after Video Assisted Teaching Program among Diabetic Patients

N = 50

Demographic variables	Before Video Assisted Teaching			After Video Assisted Teaching		
	Above	Upto	χ^2	Above	Upto	χ^2
	Mean	Mean		Mean	Mean	
Age (in years)						
≤40	17	7	6.01*	20	4	4.98*
≥40	8	18	(df=1)	14	12	(df=1)
Gender						
Male	16	17	0.08	23	10	0.12
Female	9	8	(df=1)	11	6	(df=1)
Education						
Illiterate	1	3		2	2	
School Level	11	19	9.53*	19	11	8.59*
Under graduate	12	3	(df=3)	15	0	(df=3)
Post graduate	1	0		1	0	

Occupation						
Unemployed	7	8		9	6	
Self employed	8	11	1.87	12	7	2.03
Private employee	8	4	(df=3)	10	2	(df=3)
Government employee	2	2		3	1	
Religion						
Hindu	21	21	1.69	22	16	0.23
Other	6	2	(df=1)	6	6	(df=1)
Marital status #						
Single	24	23		2	1	
Married	1	2	-	12	15	-
Type of Family						
Nuclear	15	18	0.80	22	11	0.07
Joint	10	7	(df=1)	12	5	(df=1)
Monthly Income						
≤20,000	15	22	5.09*	12	15	4.77*
≥20,000	10	3	(df=1)	12	1	(df=1)
*P<0.05			# Chi square was not done as it is not applicable			

The findings from the table 5 shows that some of the demographic variables like age ($\chi^2 = 6.01$, $df=1$, $\chi^2 = 4.98$), education ($\chi^2=9.53$, $df=3$, $\chi^2=8.59$), monthly income ($\chi^2=5.09$, $df=1$, $\chi^2=4.77$ at $P<0.05$) had significant association with level of knowledge on prevention of peripheral vascular disease before and

after video assisted teaching program at $P < 0.05$ level respectively. Hence null hypothesis Ho2 with regard to “there will be no significant association between the selected demographic variables of diabetic patients and their pre test and post test level of knowledge regarding prevention of peripheral vascular disease” was rejected.

Other variables like gender, occupation, religion, marital status and type of family had no significant association with level of knowledge on prevention of peripheral vascular disease before after video assisted teaching program. Hence null hypothesis Ho2 with regard to “there will be no significant association between the selected demographic variables of diabetic patients and their pre test and post test level of knowledge regarding prevention of peripheral vascular disease” was retained.

Table 6

Association between the Selected Clinical Variables and the Level of Knowledge on Prevention of Peripheral Vascular Disease Before and After video Assisted Teaching Program among Diabetic patients.

N = 50

Demographic variables	Before Video Assisted Teaching			After Video Assisted Teaching		
	Teaching			Teaching		
	Above	Upto	χ^2	Above	Upto	χ^2
	Mean	Mean		Mean	Mean	
Duration of Diabetes mellitus (in years)						
≤ 15	27	15	4.08*	38	4	4.36*
≥15	8	0	(df=1)	5	3	(df=1)
Treatment for Diabetes Mellitus						
Yes	19	17	4.02*	34	2	5.05*
No	3	11	(df=1)	10	4	(df=1)
Duration of Hypertension						
≤ 15	24	20	3.03	21	23	0.01
≥15	1	5	(df=1)	3	3	(df=1)

Habit of Smoking						
Yes	14	18	5.63*	30	2	4.43*
No	2	16	(df=1)	13	5	(df=1)
Action to quit Smoking						
Yes	16	15	0.08	21	10	0.002
No	9	10	(df=1)	13	6	(df=1)
Family history of Peripheral Vascular Disease						
Yes	8	10	0.34	10	8	2.001
No	17	15	(df=1)	24	8	(df=1)
Family history of Amputation						
Yes	6	11	1.18	12	5	0.41
No	17	16	(df=1)	26	7	(df=1)

***P<0.05**

Table 6 suggests that there was a significant association between the duration of diabetes mellitus ($\chi^2 = 4.08$, $df=1$, $\chi^2 = 4.36$), treatment for diabetes mellitus ($\chi^2=4.02$, $df=1$, $\chi^2=5.05$) and habit of smoking ($\chi^2=5.63$, $df=1$, $\chi^2=4.43$) and the level of knowledge on prevention of peripheral vascular disease at $P<0.05$ level. Hence the null hypothesis H_03 with regard to “there will be no significant association between the selected clinical variables of diabetic patients and their pre test and post test level of knowledge regarding prevention of peripheral vascular disease” was rejected.

However there was no significant association between other variables such as duration of hypertension, action to quit smoking and family history of peripheral vascular disease and amputation and the level of knowledge on prevention of peripheral vascular disease. Hence the null hypothesis Ho3 with regard to “there will be no significant association between the selected clinical variables of diabetic patients and their pre test and post test level of knowledge regarding prevention of peripheral vascular disease” was retained.

Summary

This chapter dealt with analysis and interpretation of the data obtained by researcher. The analysis showed that video assisted teaching program on prevention of peripheral vascular disease was effective to enhance the knowledge level of the diabetic patients by comparing the pre test and post test scores on knowledge.

CHAPTER V

DISCUSSION

Statement of the Problem

A Pre Experimental Study to Assess the Effectiveness of Video Assisted Teaching Program on Level of Knowledge Regarding Prevention of Peripheral Vascular Disease Among Diabetic Patients admitted in G Kuppuswamy Naidu Memorial Hospital at Coimbatore

Objectives of the Study

1. To assess the pre test and post test level of knowledge on prevention of peripheral vascular diseases among diabetic patients
2. To assess the effectiveness of video assisted teaching by comparing the pre test and post test scores of knowledge on prevention of peripheral vascular disease among diabetic patients
3. To determine the association between the selected demographic variables of diabetic patients and their pre test and post test scores of knowledge on prevention of peripheral vascular disease.
4. To determine the association between the selected clinical variables of diabetic patients and their pre test and post test scores of knowledge on prevention of peripheral vascular disease.

The conceptual framework for this study is based on “Theory of Goal Attainment” by Imogene King. A pre experimental study of one group pre test and post test design was used. The study included 50 diabetic patients selected by non

probability convenient sampling technique. The present study was conducted in G.Kuppuswamy Naidu memorial Hospital, Coimbatore. The variables of the study were video assisted teaching program and knowledge.

An extensive review of literature and guidance by experts laid to the foundation of development of demographic variable proforma, clinical variable proforma, structured interview schedule. The data collection tools were validated and reliability was established. After two weeks of pilot study, then data collection for main study was conducted.

The level of knowledge on prevention of peripheral vascular disease was assessed for diabetic patients. The video assisted teaching program of sixteen minutes duration was provided for the group. Then the level of knowledge was assessed again after 4 days. The data obtained was analyzed using descriptive and inferential statistics.

Demographic Variables Distribution of the Diabetic Patients

Most of the diabetic patients were above 40 years old (52%), were males (66%), belonged the religion Hindu (84%), with a school level education (60%), from nuclear family (66%). Significant percentage of them were self employed (38%) and had a monthly income of 10,000- 20,000 (60%).

Advancing age enhances the risk of peripheral vascular disease in both gender. As a result of ageing process there will be loss of sensory perception, this will be misunderstood with the warning signs of peripheral vascular disease and thereby increases the incidence of peripheral vascular disease. Thus the diabetic

patients with advancing age require health educational programs on prevention of peripheral vascular disease.

Educational status plays a vital role in acquiring knowledge. Patients who are not aware of complications of an unhealthy lifestyle may increase the rate of diseases. Diabetic patients with poor knowledge regarding their disease condition are more risk for peripheral vascular disease. Early diagnosis and proper educational programs on prevention strategies will reduce the morbidity rates. Hence it is necessary to conduct an educational program for diabetic patients on prevention of peripheral vascular disease.

Clinical Variable Distribution of the Diabetic Patients

Majority of the diabetic patients had diabetes mellitus since 11 – 15 years (84%) and 72% of the patients were on regular treatment.. Significant percentage of the patients were hypertensive since 11 – 15 years (48%), from a family history of peripheral vascular diseases (64%) and amputation (66%). 64% of patients were smokers, and 62% of them attempted to quit smoking.

These results are consistent with the study conducted by Agarwal et al (2011) in which they studied 146 patients in which 79 men and 67 women. The prevalence of peripheral vascular disease was 14.4% with women having a slighter higher prevalence 14.9% as compared to men. Coronary artery disease was present in 28%. Age, duration of diabetes, smoking, blood pressure were significant predictors of peripheral vascular disease. They concluded that the risk factors significantly associated with peripheral vascular disease were higher age, longer duration of diabetes, high blood pressure and smoking.

The felt need by the researcher is to improve the knowledge of the old diabetic patients about prevention of peripheral vascular disease. Hence it is a nursing concern towards diabetic patients who is a smoker and having hypertension, to make them understand the benefits of early prevention for peripheral vascular disease. Risk factors such as smoking, hypertension associated with diabetes will have a great toll in the life of a diabetic patient. Detailed education regarding the life style modification will make a vital change in each of the patient's health.

The first objective was to assess the pre test and post test level of knowledge on prevention of peripheral vascular diseases among diabetic patients

Majority of the diabetic patients had poor knowledge before intervention (70%) and most of them had good knowledge (68%), after intervention. This shows that Video Assisted Teaching Program was effective in improving the knowledge of diabetic patients.

Knowledge is a significant pre requisite to implement both the primary and secondary preventive strategy for the cardiovascular diseases. Khan (2006) conducted a study to assess the level of knowledge on the changeable risk factors among patients admitted in a tertiary care hospital in Karachi, Pakistan. A structured questionnaire was used to conduct interview among 720 subjects. The knowledge on the four main modifiable risk factors of cardiovascular diseases like smoking, obesity, exercise and fatty food consumption were assessed. The findings highlighted that there was lack of knowledge on modifiable risk factors for heart diseases.

In this study, while conducting pre test most of the patients were unaware of peripheral vascular disease prevention. Diabetic patients with associated risk factors such as smoking, obesity are more prone to develop peripheral vascular disease, therefore health education regarding life style modification can make a tremendous change in their life. In the post test there was a hike in the knowledge level of the patient. It shows that video assisted teaching program on prevention of peripheral vascular disease was effective and which could make awareness among the diabetic patients. Hence they can prevent peripheral vascular disease and also advice other newly detected diabetic patients regarding the prevention strategies of peripheral vascular disease.

The second objective was to assess the effectiveness of video assisted teaching by comparing the pre test and post test scores of knowledge on prevention of peripheral vascular disease among diabetic patients

The mean score of diabetic patients is high in post test ($M=19.16$, $SD=3.66$) in comparison with pre test ($M=11.66$, $SD=4.39$) which is statistically proven to be significant $P<0.001$, thus the null hypothesis H_01 with regard to “there will be no significant difference between the pre-test and post-test level of knowledge scores on prevention of peripheral vascular disease among diabetic patients” was rejected.

The results are consistent with the study conducted by Bibi Baby (2010). The researcher examined the effectiveness of a structured teaching program on peripheral arterial disease. The researcher conducted a pre experimental study in which the knowledge and attitude on peripheral arterial disease was assessed. There were 60 subjects who were admitted in K.C. Hospital, Bangalore. The study

also concluded that, the structured teaching program was effective to improve the knowledge and attitude of patients regarding the peripheral arterial disease.

In this study most of the diabetic patients were unaware of peripheral vascular disease in pre test. After detailed video assisted teaching program on prevention of peripheral vascular disease it was found that level of knowledge increased in the post test. As a medium of education, video assisted teaching program was highly effective for the diabetic patients. The felt need of the researcher is that the video assisted teaching program on prevention of peripheral vascular disease can be a part of usual counselling protocol for diabetic patients who visits outpatient department.

The third objective was to determine the association between the selected demographic variables of diabetic patients and the pre-test and post test scores of knowledge on prevention of peripheral vascular disease among diabetic patients

Some of the demographic variables like age ($\chi^2 = 6.01$, $df=1$, $\chi^2 = 4.98$), education ($\chi^2=9.53$, $df=3$, $\chi^2=8.59$), monthly income ($\chi^2=5.09$, $df=1$, $\chi^2=4.77$ at $P<0.05$) had significant association with level of knowledge on prevention of peripheral vascular disease before and after video assisted teaching program at $P<0.05$ level respectively. Hence null hypothesis H_{o2} with regard to “there will be no significant association between the selected demographic variables of diabetic patients and their pre test and post test level of knowledge regarding prevention of peripheral vascular disease” was rejected.

Other variables like gender, occupation, religion, marital status and type of family had no significant association with level of knowledge on prevention of peripheral vascular disease before after video assisted teaching program. Hence null hypothesis Ho2 with regard to “there will be no significant association between the selected demographic variables of diabetic patients and their pre test and post test level of knowledge regarding prevention of peripheral vascular disease” was retained.

These results are consistent with the study conducted by Dawson et al(2002) in which they concluded that the incidence and prevalence of peripheral arterial disease increase with age, with estimated prevalence rates of 3% among those 40-59 years of age, 8% in those 60-69 years of age, and 19% in those over age 70 years.

In this study it depicted that there was an association between the age and the level of knowledge on prevention of peripheral vascular disease. Advancing age increases the risk of peripheral vascular disease. Hence it is important to give health education for old patient and their family members regarding prevention of peripheral vascular disease.

Educational Status showed association with the level of knowledge on prevention of peripheral vascular disease. It was found that patients with low educational status were unaware of peripheral vascular disease. It is necessary to make those patients with poor educational status familiar with peripheral vascular disease and its prevention. The video assisted teaching program on prevention of peripheral vascular disease made in such a way that each diabetic patient with poor educational level also can understand the concept easily.

Other demographic variables such as sex, religion, occupation, marital status and type of family had no association with the level of knowledge. It suggest that irrespective of all these variables health education on prevention of peripheral vascular disease can be given to any diabetic patient.

The fourth objective was to determine the association between the selected clinical variables of diabetic patients and the pre test and post test scores of knowledge on prevention of peripheral vascular disease among diabetic patients

There was a significant association between the duration of diabetes mellitus ($\chi^2 = 4.08$, $df=1$, $\chi^2 = 4.36$), treatment for diabetes mellitus ($\chi^2=4.02$, $df=1$, $\chi^2=5.05$) and habit of smoking ($\chi^2=5.63$, $df=1$, $\chi^2=4.43$) and the level of knowledge on prevention of peripheral vascular disease at $P<0.05$ level. Hence the null hypothesis H_{o3} with regard to “there will be no significant association between the selected clinical variables of diabetic patients and their pre test and post test level of knowledge regarding prevention of peripheral vascular disease” was rejected.

However there was no significant association between other variables such as duration of hypertension, action to quit smoking and family history of peripheral vascular disease and amputation and the level of knowledge on prevention of peripheral vascular disease. Hence the null hypothesis H_{o3} with regard to “there will be no significant association between the selected clinical variables of diabetic patients and their pre test and post test level of knowledge regarding prevention of peripheral vascular disease” was retained.

These results are consistent with an epidemiologic study conducted on peripheral arterial disease in patients with diabetes mellitus which confirms an association between diabetes and an increased prevalence of peripheral arterial disease. Individuals with diabetes have a two to fourfold increase in peripheral arterial disease rates. The duration and severity of diabetes correlate with the incidence and extent of peripheral arterial disease. Mowla (2006)

In this study most of the diabetic patients with long duration of diabetes mellitus had knowledge regarding prevention of peripheral vascular disease. They shared their ideas during the interaction session. It depicted that diabetic patients who is taking treatment since long time had much knowledge regarding the prevention of peripheral vascular disease. The felt need of the researcher is that encourage those diabetic patients who is having good knowledge to perform the prevention strategies properly and to spread this information for further reduction of mortality.

Other clinical variables such as duration of hypertension, action to quit smoking, family history of peripheral vascular disease and amputation had no association with the level of knowledge. It suggested that irrespective of all these clinical variables health education can be given to the diabetic patients regarding prevention of peripheral vascular disease.

Summary

This chapter dealt with the discussion of various aspects of the study findings. This emphasized the demographical and clinical variables of diabetic patients. It has also dealt with the mean and standard deviation of level of knowledge before and after video assisted teaching, association between selected demographic and clinical variables with level of knowledge.

CHAPTER VI

SUMMARY, CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS

Summary

This study was conducted by the researcher to find the effectiveness of Video Assisted Teaching Program upon level of knowledge related to prevention of peripheral vascular disease among diabetic patients.

Objectives of the Study

1. To assess the pre test and post test level of knowledge on prevention of peripheral vascular diseases among diabetic patients
2. To assess the effectiveness of video assisted teaching by comparing the pre test and post test scores of knowledge on prevention of peripheral vascular disease among diabetic patients
3. To determine the association between the selected demographic variables of diabetic patients and the pre-test and post test scores of knowledge on prevention of peripheral vascular disease among diabetic patients
4. To determine the association between the selected clinical variables of diabetic patients and the pre-test and post test scores of knowledge on prevention of peripheral vascular disease among diabetic patients

Null Hypothesis

Ho1: There will be no significant difference between the pre-test and post-test level of knowledge scores on prevention of peripheral vascular disease among diabetic patients.

Ho2: There will be no significant association between the selected demographic variables of diabetic patients and their pre test and post test level of knowledge regarding prevention of peripheral vascular disease.

Ho3: There will be no significant association between the selected demographic variables of diabetic patients and their pre test and post test level of knowledge regarding prevention of peripheral vascular disease.

Major Findings of the Study

Demographic Variables of Diabetic Patients

Most of the diabetic patients were belonged to the age group of above 40 years old (52%), were males (66%), had a school level education (60%), self employed (38%) and from nuclear family (66%). Majority of the patients were Hindus (84%).

Clinical Variables of Diabetic Patients

Majority of the diabetic patients had diabetes mellitus since 11 – 15 years (84%) and 72% of them were on regular treatment. Most of the patients were hypertensive since 11 – 15 years (48%) and from a family history of peripheral vascular diseases (64%) and amputation (66%). Most the patients were smokers (64%) and 62% of the patients attempted to quit smoking.

Frequency and Percentage Distribution of Level of knowledge on Prevention of Peripheral vascular Diseases among Diabetic Patients

Most of the diabetic patients had poor knowledge on prevention of peripheral vascular disease before intervention (70%) and most of them had good knowledge on prevention of peripheral vascular disease (68%) after intervention.

Comparison of Mean and Standard Deviation of Knowledge on Prevention of Peripheral vascular Disease Before and After Video Assisted Teaching Program among Diabetic Patients

The mean score of diabetic patients is high in post test (M=19.16, SD=3.66) in comparison with pre test (M=11.66, SD=4.39) which is statistically proven to be significant $P<0.001$. Thus the null hypothesis Ho1 with regard to “there will be no significant difference between the pre test and post test level of knowledge scores on prevention of peripheral vascular disease among diabetic patients” was rejected.

Association between the Selected Demographic variables of Diabetic Patients and the Pre Test and Post Test Scores of Knowledge on Prevention of Peripheral Vascular Disease among Diabetic patients

Demographic variables like age ($\chi^2 = 6.01$, $df=1$, $\chi^2 = 4.98$), education ($\chi^2=9.53$, $df=3$, $\chi^2=8.59$), monthly income ($\chi^2=5.09$, $df=1$, $\chi^2=4.77$ at $P<0.05$) had significant association with level of knowledge on prevention of peripheral vascular disease before and after video assisted teaching program at $P<0.05$ level respectively. Hence null hypothesis Ho2 with regard to “there will be no significant association between the selected demographic variables of diabetic patients and their pre test and post test level of knowledge regarding prevention of peripheral vascular disease” was rejected.

Other variables like gender, occupation, religion, marital status and type of family had no significant association with level of knowledge on prevention of peripheral vascular disease before after video assisted teaching program. Hence

null hypothesis Ho2 with regard to “there will be no significant association between the selected demographic variables of diabetic patients and their pre test and post test level of knowledge regarding prevention of peripheral vascular disease” was retained.

Association between the Selected Clinical Variables of Diabetic Patients and the Pre Test and Post Test Scores of Knowledge on Prevention of Peripheral Vascular Disease among Diabetic Patients

There was a significant association between the duration of diabetes mellitus ($\chi^2 = 4.08$, $df=1$, $\chi^2 = 4.36$), treatment for diabetes mellitus ($\chi^2=4.02$, $df=1$, $\chi^2=5.05$) and habit of smoking ($\chi^2=5.63$, $df=1$, $\chi^2=4.43$) and the level of knowledge on prevention of peripheral vascular disease at $P<0.05$ level. Hence the null hypothesis Ho3 with regard to “there will be no significant association between the selected clinical variables of diabetic patients and their pre test and post test level of knowledge regarding prevention of peripheral vascular disease” was rejected.

However there was no significant association between other variables such as duration of hypertension, action to quit smoking and family history of peripheral vascular disease and amputation and the level of knowledge on prevention of peripheral vascular disease. Hence the null hypothesis Ho3 with regard to “there will be no significant association between the selected clinical variables of diabetic patients and their pre test and post test level of knowledge regarding prevention of peripheral vascular disease” was retained.

Conclusion

This study shows that Video Assisted Teaching Program was effective in increasing the level of knowledge. The group of diabetic patients who received Video Assisted Teaching Program had increased level of knowledge. The Video Assisted Teaching Program is an interesting video of 16 minutes which increases knowledge related to prevention of peripheral vascular disease and hence the nurses could be encouraged to use this.

Implications

Nursing Practice

Diabetic patients are high risk for developing peripheral vascular disease. Life style practices such as smoking, obesity, increases the risk. Nurses need to take up the responsibility to educate and create awareness among diabetic patients to improve their knowledge and thus reduce the mortality and morbidity rate caused by peripheral vascular disease. Nurses can play a vital role in motivating the diabetic patients in lifestyle modifications by giving adequate counselling regarding healthy lifestyle practices. Nurses can develop evidence based practise and include video assisted teaching as an integral nursing intervention. Nurses should use video assisted teaching program as a modality to increase the level of knowledge in their clinical area as it is interesting, harmless and highly effective.

Nursing Education

The nursing profession has a long history of viewing and caring for individuals in a holistic manner. A national conference conducted by National

Institutes of Health of Alternative Medicine and the Uniformed Services University of Health Sciences concluded that nursing and medical education should include information about complementary and alternative therapies. Nurse educators should consider the inclusion of complementary and alternative therapies in nursing curricula with increasing Inherent in the nurse's role is the ability to assess, intervene and evaluate preventive, supportive, and restorative functions of a patient's physical, emotional, mental and spiritual domains.

Nursing curriculum should inculcate video assisted teaching programmes for nursing students. This study emphasizes the need to teach the students regarding ill effects of peripheral vascular disease and its influence on cardiac mortality and morbidity. Nurse educators should plan and implement the workshops and in-service education to update the knowledge of nurses, who plays a key role in assessing and managing the diabetic patients.

Nursing Administration

The nurse administrator should incorporate in service education during the induction programme to update the knowledge of novice nurses. The nurse administrator should conduct surveys and organize teaching programmes to create awareness on ill effects of peripheral vascular disease in community setting and implement mass media interventions to make the public aware of peripheral vascular disease.

Nursing Research

Evidence based nursing practise must take higher profile in order to increase awareness on prevention of peripheral vascular disease among diabetic

patients and help them to adopt lifestyle modification. Nursing research on video assisted teaching on prevention of peripheral vascular disease will be a valuable reference material for further researchers. Qualitative study can be undertaken to assess the self-report of the participants.

Recommendations

- A comparative study can be done to compare other interventions on prevention of peripheral vascular disease.
- Health education on prevention of peripheral vascular disease can be given for the newly detected diabetic patient to reduce the morbidity rate.
- Video assisted teaching program on prevention of peripheral vascular disease can be a part of usual counselling protocol for diabetic patients who visits outpatient department.

Limitations

- The study findings cannot be generalized due to small sample size.
- Quasi Experimental research was not possible due to practical difficulties.

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APPENDIX I
LETTER SEEKING PERMISSION TO CONDUCT THE STUDY

To

Dr.(Col.) T.B. Ramakrishnan., MBBS
Medical Superintendent,
G Kuppuswamy Naidu Memorial Hospital,
Coimbatore- 37

Respected Sir,

Sub: To request permission for research study

As a part of the curriculum requirement of 2nd year Msc (N) student Ms.Geethu.

M. G has selected the following title for her research study.

“A Pre Experimental Study to Assess the Effectiveness of Video Assisted Teaching Program on Level of Knowledge Regarding Prevention of Peripheral Vascular Disease Among Diabetic Patients admitted in G Kuppuswamy Naidu Memorial Hospital at Coimbatore”

So I kindly request your good selves to permit her to conduct study in your esteemed institution.

Thanking you,

Prof. Jaeny Kemp
Principal
Institute of Nursing,
G Kuppuswamy naidu Memorial Hospital,
Coimbatore- 37.

APPENDIX II

LETTER PERMITTING TO CONDUCT THE STUDY

To

Geethu. M. G

Msc (N) II year student

Apollo College of Nursing

Chennai- 600 095

Sub: Permitting to Conduct the study

As a part of the curriculum requirement of 2nd year Msc (N) student Ms.Geethu. M. G has requested to conduct the study entitled “A Pre Experimental Study to Assess the Effectiveness of Video Assisted Teaching Program on Level of Knowledge Regarding Prevention of Peripheral Vascular Disease Among Diabetic Patients admitted in G Kuppuswamy Naidu Memorial Hospital at Coimbatore”. It is to notify that permission granted to conduct the study in G Kuppuswamy naidu memorial hospital, Coimbatore.




Dr. (Col.) T.B. RAMAKRISHNAN
Medical Supdt.
G. Kuppuswamy Naidu Memorial Hospital
Coimbatore - 641 037.

Dr.(Col.) T.B. Ramakrishnan .,MBBS
Medical Superintendent
GKNM Hospital, Coimbatore - 37

APPENDIX III

ETHICAL COMMITTEE PERMITTING LETTER

Ms.Geethu.M.G, II year M.Sc Nursing student conducted a study on“**Assessing the Effectiveness of Video assisted Teaching on Prevention of peripheral Vascular disease among Diabetic Patients admitted in GKNM Hospital, Coimbatore**” with the approval of the ethical committee during the academic year of 2014-2015 in GKNM Hospital, Coimbatore. This is the partial fulfillment of the requirement for award of the degree in Master of Science, Branch - I, Medical Surgical Nursing, subspecialty - Cardiovascular and Thoracic Nursing, by the Tamilnadu Dr. M.G.R Medical University.




Dr. (Col). T.B. RAMAKRISHNAN
Medical Supdt.
G. Kuppuswamy Naidu Memorial Hospital
Coimbatore - 641 037.

Dr.(Col.) T.B. Ramakrishnan .,MBBS
Medical Superintendent
GKNM Hospital, Coimbatore - 37

APPENDIX IV

LETTER SEEKING PERMISSION FOR CONTENT VALIDITY

From

Ms. Geethu.M.G.
M.Sc. (Nursing) Second Year,
Apollo College of Nursing,
Chennai– 600 095.

To

Forwarded Through:
Dr. Latha Venkateshan,
Principal,
Apollo College of Nursing,
Chennai– 600 095.

Sub: Requesting for opinions and suggestions of experts for establishing content validity for research tool.

Respected Madam,

I am a postgraduate student of Apollo College of Nursing. I have selected the below mentioned topic for research project to be submitted to The Tamil Nadu Dr. M.G.R Medical University, Chennai as a partial fulfillment of Masters of Nursing Degree.

TITLE OF THE TOPIC:

“A Pre Experimental Study to Assess the Effectiveness of Video Assisted Teaching Program on Level of Knowledge Regarding Prevention of Peripheral Vascular Disease Among Diabetic Patients admitted in G Kuppuswamy Naidu Memorial Hospital, Coimbatore”

With regards may I kindly request you to validate my tool for its appropriateness and relevancy. I am enclosing the Background, Need for the study, Statement of the problem, Objectives of the study, Demographic Variable Proforma of diabetic patients, Clinical Variable Proforma of diabetic patients, Structured knowledge questionnaire on Prevention of Peripheral Vascular Disease. I would be highly obliged and remain thankful for your great help if you could validate and send it as soon as possible.

Thanking you,

Date:

Yours sincerely,

Place:

Geethu.M.G

APPENDIX V
LIST OF EXPERTS

- 1. Dr. R. Srinivasan, MD (General Medicine), MRCP(UK), CCST(UK)**
Consultant Diabetologist,
G Kuppuswamy Naidu Memorial Hospital,
Coimbatore-37
- 2. Prof. Jaeny Kemp, Msc(N)., PhD.(N),**
Principal,
Institute of Nursing,
G Kuppuswamy Naidu Memorial Hospital,
Coimbatore-37
- 3. Dr. LathaVenkatesan, M.Sc (N)., M.Phil. (N)., Ph.D.(N),**
Principal and Professor in Maternity Nursing,
Apollo College of Nursing,
Chennai- 600 095
- 4. Prof. Lizy Sonia. A, M.Sc.(N)., PhD.(N),**
Vice Principal and Professor in Medical Surgical Nursing,
Apollo College of Nursing,
Chennai-600 095
- 5. Prof. K. Vijayalakshmi, M.Sc.(N)., PhD.(N),**
Professor in Psychiatric Nursing,
Apollo College of Nursing,
Chennai- 600 095
- 6. Mrs. Sasi Kala, M.Sc.(N),**
Reader in Medical Surgical Nursing
Apollo College Of Nursing
Chennai-600 095

APPENDIX VI
CERTIFICATE FOR CONTENT VALIDITY

TO WHOMSOEVER IT MAY CONCERN

This is to certify that tools and content for the research study developed by II year M.Sc (Nursing) student of Apollo College of Nursing for her dissertation “A Pre Experimental Study to Assess the Effectiveness of Video Assisted Teaching Program on Level of Knowledge Regarding Prevention of Peripheral Vascular Disease Among Diabetic Patients admitted in G Kuppuswamy Naidu Memorial Hospital, Coimbatore” was validated.

Signature of the Expert

Name and Designation

APPENDIX VII
LETTER SEEKING CONSENT FROM PARTICIPANTS

Dear participant/ bystander,

I am Geethu. M.G a M.Sc. Nursing student of Apollo College of Nursing, Chennai. As a part of my study, a research on “**Effectiveness of Video Assisted Teaching Program on Level of Knowledge Regarding Prevention of Peripheral Vascular Disease Among Diabetic Patients admitted in G Kuppuswamy Naidu Memorial Hospital, Coimbatore**”

I hereby seek your consent and co-operation to participate in the study. Please be frank and honest in response. The information obtained will be kept confidential and anonymity will be maintained.

Signature of the researcher

IHereby consent to participate my relative in this study

Place:

Date:

Signature of the participant/ bystander

APPENDIX VIII
CERTIFICATE FOR ENGLISH EDITING
TO WHOMSOEVER IT MAY CONCERN

This is to certify that dissertation entitled **“Effectiveness of Video Assisted Teaching Program on Level of Knowledge Regarding Prevention of Peripheral Vascular Disease Among Diabetic Patients admitted in G Kuppuswamy Naidu Memorial Hospital, Coimbatore”** by Geethu.M.G, M.Sc (N) II yr student, Apollo College of Nursing, Chennai was edited for English language appropriateness.




DEVI. C
H.S.S.T (English)
Govt. H.S.S., Thrickodithanam
Signature

APPENDIX IX

DEMOGRAPHIC VARIABLE PROFORMA FOR DIABETIC PATIENTS

Purpose

This proforma is used by researcher to collect demographic variables such as age, gender, education, occupation, marital status, religion, monthly income in rupees.

Instructions

The researcher will collect information by interviewing the patients

Sample number:

1. Age in years

1.1 <30 yrs

1.2 31 to 40 yrs

1.3 > 41yrs

2. Gender

2.1 Male

2.2 Female

3. Education

3.1 Illiterate

3.2 School Level

3.3 Under graduate

3.4 Post graduate

4. Occupation

4.1 Unemployed

4.2 Self employed

4.3 Government employee

4.4 private employee

5. Marital status

5 .1 Single

5 .2 Married

6. Religion

6.1 Hindu

6.2 Christian

6.3 Muslim

7. Monthly Income in Rupees

7.1 < 10,000

7 .2 10001 – 20000

7.3 > 20000

8. Type of family

5 .1 Nuclear

5 .2 Joint

APPENDIX X

CLINICAL VARIABLE PROFORMA FOR DIABETIC PATIENTS

Purpose

This proforma is used to identify the clinical variables of patients such as duration of diabetes, treatment for diabetes, duration of hypertension, habit of smoking, actions to quit smoking, family history of peripheral vascular diseases and amputation.

Instructions

The investigator will collect the following data from the patients

1. Duration of diabetes mellitus

1.1 <10

1.2 11-15

1.3 >15

2. Treatment for diabetes mellitus

2.1 Yes

2.2 No

3. If hypertensive ; duration of hypertension

3.1 <10

3.2 11-15

3.3 >15

4. Habit of smoking

4.1 Yes

4.2 No

5. Action to quit smoking

5.1 Yes

5.2 No

6. Family History of peripheral vascular diseases

6.1 Yes

6.2 No

7. Family History of amputation

7.1 Yes

7.2 No

APPENDIX XI

BLUE PRINT OF STRUCTURED QUESTIONNAIRE ON PREVENTION OF PERIPHERAL VASCULAR DISEASE

SL NO	QUESTIONS	ITEM NUMBER	TOTAL NUMBER OF ITEMS	PERCENTAGE
1	Definition & incidence of peripheral vascular disease	1,2,3	3	12%
2	Areas affected by peripheral vascular disease	4,5	2	8%
3	Cause & risk factors of peripheral vascular disease	6,7,8,9,10,11	6	24%
4	Signs & Symptoms of peripheral vascular disease	12,13,14,15	4	16%
5	Diagnostic measures of peripheral vascular disease	16,17,18,19,20,21	6	24%
6	Prevention of peripheral vascular disease	22,23,24,25	4	16%

APPENDIX XII
STRUCTURED QUESTIONNAIRE TO ASSESS THE KNOWLEDGE
REGARDING ILL EFFECTS OF SMOKING

Purpose

This structured questionnaire is used to identify the level of knowledge of diabetic patients regarding prevention of peripheral vascular disease. This questionnaire contains all the aspects of peripheral vascular diseases such as definition causes, risk factors, warning signs, diagnostic findings and prevention strategies.

Instruction:

- Kindly answer all the questions
- Each question has 3 alternatives
- Please understand each question and respond for each option.

Questions:

1. What do you mean by peripheral vascular disease?

a.Decreased blood flow to the extremities

b.Paralysis of the extremities

c.Increased blood flow to the extremities

2. Which gender is mostly affected by peripheral vascular disease?

a.Man

b.Woman

c.Both

3. Which age group is mostly affected with peripheral vascular disease?

a.Children

b.Middle age

c.Old age

4. What causes peripheral vascular disease?
- a. Block in the blood vessel due to fatty deposit ☐
 - b. Inflammation of the blood vessel ☐
 - c. None of the above ☐
5. Which of the following is affected in peripheral vascular disease?
- a. Artery ☐
 - b. Vein ☐
 - c. Both ☐
6. Which part of the body is commonly affected by peripheral vascular disease?
- a. Kidney ☐
 - b. Legs ☐
 - c. Brain ☐
7. What are the risk factors for developing peripheral vascular disease?
- a. Diabetes Mellitus ☐
 - b. Smoking ☐
 - c. Hypertension ☐
 - d. All the above ☐
8. How does diabetes mellitus affect the blood vessel?
- a. Affect the cells present in the blood vessel wall ☐
 - b. Affect the platelet function ☐
 - c. Both ☐
9. How does smoking affect the blood vessel?
- a. Dilate the blood vessel ☐
 - b. Narrow and occlude the blood vessel ☐
 - c. None of the above ☐

10. How does hypertension affect the blood vessel?

a.Reduce the clotting mechanism

b.Increase the clotting mechanism

c.Both a & b

11. How does hyperlipidemia affect the blood vessel?

a.Deposit fat

b.Deposit glucose

c.Deposit urea

12.What are the symptoms of peripheral vascular disease?

a.Pain in the extremities

b.Heaviness in the legs

c.Cramps

d.All the above

13. What is the typical pain in peripheral vascular disease?

a.Pain in the extremities only during walking and exercise

b.Pain during rest

c.None of the above

14. What is the clinical signs of peripheral vascular disease?

a.Absence of peripheral pulse

b.Cold and clammy skin of the extremities

c.Cyanosis of legs

d.All the above

15. What is the measure to reduce the pain in early stage of peripheral vascular disease?

a.Rest

b.Exercise

c.Hot application

16. What is the diagnostic measure to assess the pain in the extremities?

a.Treadmill Test

b.Ultrasound

c.X ray

17. How will be the blood pressure in the affected leg?

a.High

b.Low

c.Normal

18. What are the blood tests done to identify peripheral vascular disease?

a.Blood glucose level

b.Lipid profile

c.Both

19. What is the diagnostic test to measure the blood flow to the extremities?

a.Doppler ultrasound scan

b.X ray

c.None of the above

20. How will you identify peripheral vascular disease?

a.Oral examination

b.Rectal examination

c.Foot examination

21. How will be the process of wound healing in peripheral vascular disease?

a.Spontaneous

b.Normal

c.Delayed

22. What are the medications used for peripheral vascular disease?

a.Anticoagulants

b.Antihypertensives

c.Hypoglycemic agents

d.All the above

23. How can peripheral vascular disease be prevented?

a.Life style modification

b.Proper follow up

c.Medication

d.All the above

24. What are the lifestyle modifications can be done in peripheral vascular disease?

a.Quit smoking

b.Dietary changes

c.Exercise and rest

d.All the above

25. What is the complication of peripheral vascular disease?

a.Foot ulcer leading to amputation

b.Cancer

c.Fracture

APPENDIX XIII

ANSWER KEY

Scoring Procedure:

Each correct response gets a score of one (1). There are 25 items and hence the maximum score of the knowledge questions is 25.

Q.No	ANSWER	Q.No	ANSWER
1	a	16	a
2	c	17	b
3	c	18	c
4	a	19	a
5	c	20	c
6	b	21	c
7	d	22	d
8	c	23	d
9	b	24	d
10	b	25	a
11	a		
12	d		
13	a		
14	d		
15	a		

SCORING

20- 25

13- 19

0- 12

INTERPRETATION

Good

Average

Poor

APPENDIX XIV
LESSON PLAN
PREVENTION OF PERIPHERAL VASCULAR DISEASE

TOPIC – PREVENTION OF PERIPHERAL VASCULAR DISEASE

GROUP	: DIABETIC PATIENTS
PLACE	: G KUPPUSWAMY NAIDU MEMORIAL HOSPITAL, COIMBATORE
DURATION	: 4 WEEKS
METHOD OF TEACHING	: LECTURE CUM DISCUSSION
MEDIA OF TEACHING	: VIDEO ASSISTED TEACHING PROGRAMME
EDUCATOR	: II YEAR MSC (N) STUDENT, APOLLO COLLEGE OF NURSING CHENNAI

GENERAL OBJECTIVE:

The diabetic patients will gain adequate knowledge regarding prevention of peripheral vascular disease.

SPECIFIC OBJECTIVE

At the end of the session study participants are able to

- define peripheral vascular disease.
- list down the causes and risk factors of peripheral vascular disease.
- enumerate the warning signs and symptoms of peripheral vascular disease.
- enlist the diagnostic measures of peripheral vascular disease.
- describe the complications of peripheral vascular disease.
- explain about the preventive measures of peripheral vascular disease.

Sl.No	Time	Specific Objective	Content	Teacher activity	Learner activity	AV aids	Evaluation
1	1mt	introduce the topic	Introduction Peripheral vascular disease is a group of diseases which affect the blood vessels. If left untreated it lead to loss of limb or eventually the life itself.	Lecture cum discussion	Listening	Video on prevention of peripheral vascular disease.	What you mean by peripheral vascular disease?
2	1mt	define peripheral vascular disease	DEFINITION Peripheral vascular disease is a slow and progressive circulatory disorder, affecting both arteries and veins. Although these vessels affect brain and heart; the legs and feet are most commonly affected, thus the name peripheral vascular disease.	Lecture cum discussion	Listening	Video	
3	4mt	list down the causes and risk factors of peripheral vascular	CAUSES & RISK FACTORS In most cases the cause is atherosclerosis, the build up of fatty deposits				

		<p>disease</p> <p>within the blood vessels that reduce the blood flow to the area. Commonly this occurs in the body where a blood vessel kinks or subdivides.</p> <p>Apart from fatty deposits, other risk factors of peripheral vascular disease include</p> <ul style="list-style-type: none"> ✓ Diabetes mellitus ✓ Smoking ✓ Hypertension ✓ Hyperlipidemia ✓ Advancing age <p>Diabetes mellitus</p> <p>Diabetes is caused by a deficiency of the pancreatic hormone insulin, which results in a failure to metabolize sugars and starch. People with diabetes have high blood glucose, also called high blood sugar or hyperglycemia.</p>	<p>Lecture cum discussion</p>	<p>Listening</p>	<p>Video</p>	<p>What are the causes of peripheral vascular disease?</p> <p>What you mean by diabetes mellitus?</p>
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			<p><u>Effect of diabetes mellitus on blood vessels</u></p> <p>The pathophysiology of vascular disease in diabetes involves abnormalities in endothelial, vascular smooth muscle cell, and platelet function. The metabolic abnormalities that characterize diabetes, such as hyperglycemia, increased free fatty acids, and insulin resistance, each provoke molecular mechanisms that contribute to vascular dysfunction.</p> <p>Platelet function is abnormal, and there is increased production of several prothrombotic factors. These abnormalities contribute to plaque formation that cause atherosclerosis and lead to peripheral vascular disease</p> <p>A better understanding of measures to maintain normal blood glucose level may unmask new strategies to reduce the</p>				<p>How diabetes mellitus causing Peripheral Vascular disease?</p>
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			<p>peripheral vascular disease in patients with diabetes.</p> <p><u>Smoking</u></p> <p>Smoking is a practice in which the substance, tobacco is burned and the smoke is tasted or inhaled</p> <p><u>Effect of Smoking on Blood vessels</u></p> <p>Tobacco induced oxidative stress (harmful stage caused by oxygen free radical attack on biological molecules such as lipids, proteins and DNA) generates platelet aggravating Factor(PAF) that involves in plaque rupture.</p> <p>Nicotine and carbon monoxide reduces the synthesis of nitric oxide and endothelial prostacycline. These molecules are potent vaso dilators. Loss of their activity promotes vasoconstriction. Further narrowing of lumen associated with</p>				<p>What is the Effect of Smoking on Blood vessels?</p>
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			<p>inflammation and thrombosis causing decreased blood supply and ends in gangrenous formation</p> <p><u>Hypertension</u></p> <p>Hypertension is abnormally high blood pressure more than 140/90 mmHg. Causes and risk factors include endocrine gland disorders , psychological stress, hereditary , life style practices</p> <p><u>Effect of hypertension on blood vessels</u></p> <p>Hypertension causes production of oxygen free radicals and lead to oxidative stress resulting in increased coagulation. Thrombosis and changes in blood vessel wall causes poor circulation and lead to peripheral vascular disease</p> <p><u>Hyperlipidemia</u></p> <p>Hyperlipidemia is elevated levels of cholesterol in blood.Cause of</p>				<p>What you mean by hypertension?</p> <p>How does hypertension causes peripheral vascular disease?</p> <p>What is</p>
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4	2mt	enumerate the warning signs and symptoms of peripheral vascular disease.	<p>hyperlipidemia is unknown and the risk factors include unhealthy life style practices and familial tendencies</p> <p><u>Effect of hyperlipidemia on blood vessels</u></p> <p>Hyperlipidemia causes fat deposition in the blood vessel wall</p> <p>WARNING SIGNS & SYMPTOMS OF PERIPHERAL VASCULAR DISEASE:</p> <p>In early stage of peripheral vascular disease leg pain that occurs in between exercise, especially in walking and exercising. This pain get relieved by rest</p> <ul style="list-style-type: none"> • Cramps • Muscle fatigue • Heaviness in the legs 	Lecture cum discussion	Listening	Video	<p>hyperlipidemia?</p> <p>How does hyperlipidemia causes peripheral vascular disease?</p> <p>Explain the warning signs and clinical signs of peripheral vascular disease?</p>
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5	2mt	enlist the diagnostic measures of peripheral vascular disease.	<ul style="list-style-type: none"> • Numbness • Pain or discomfort in the legs and buttocks during activity <p>These are the other symptoms which will disappear when the activity is stopped.</p> <p><u>Clinical signs of peripheral vascular disease</u></p> <ul style="list-style-type: none"> ○ Absence of peripheral pulse ○ Cold and clammy skin of the extremities ○ Heaviness in the legs ○ Cyanosis (bluish discolourisation) of the extremities <p>DIAGNOSTIC MEASURES</p> <p>In the early stage, peripheral vascular disease can be identified by the person himself with the help of foot examination</p> <p>Other clinical diagnostic measures include</p> <p><u>Blood pressure checking:</u></p>	Lecture cum discussion	Listening	Video	What are the diagnostic measures used for peripheral vascular disease?
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			<p>Compare blood pressure between the limbs. The blood pressure in affected leg will be low</p> <p><u>Blood Tests</u></p> <p>These tests check for risk factors such as diabetes mellitus and hyperlipidemia. Common tests done are blood glucose and lipid profile</p> <p><u>Treadmill test</u></p> <p>This test shows that if any problem during normal walking and how severe the pain is, and what level of exercise brings pain</p> <p><u>Doppler ultrasound</u></p> <p>This test performed to identify the blood flow through the blood vessels</p> <p><u>Medications</u></p> <p>Commonly used medications are</p>				
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6	1mt	describe the complications of peripheral vascular disease.	<ul style="list-style-type: none"> ▪ Antihypertensive ▪ Hypoglycaemic agents ▪ Anticoagulants ▪ Cholesterol lowering agents. <p>COMPLICATIONS</p> <p>Wound healing process in peripheral vascular disease will be delayed or poor. Foot ulcer which will lead to amputation is the complication of peripheral vascular disease</p>	Lecture cum discussion	Listening	Video	What are the complications of peripheral vascular disease?
7	5mt	explain about the preventive measures of peripheral vascular disease.	<p>PREVENTION OF PERIPHERAL VASCULAR DISEASE</p> <p>Most people with peripheral vascular disease can be treated with lifestyle modifications. Life style modifications include</p> <p><u>Dietary Changes</u></p>	Lecture cum discussion	Listening	Video	How we can prevent peripheral vascular disease?

			<ul style="list-style-type: none"> • Follow a meal plan and schedule. • Use 1600 Kcal/ Day • Reduce the amount of rice and tubers • Include all fruits, reduce the amount of fruits such as mango, grapes, and banana because they are rich in fructose • Choose lower salt • Consider lower sugar options • Include vegetables such as bitter guard, raddish, carrot, cucumber, tomato and green leafy vegetables daily • Include coffee and tea without sugar • Include skimmed milk, buttermilk and oats • Include all fishes • Include egg, chicken 				
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			<ul style="list-style-type: none"> • Use less amount of oil for cooking • Drink plenty of water. • Avoid alcohol and other beverages <p><u>Quit smoking</u></p> <p>It's you and you only have to make a strong decision to quit smoking. You can get help from your family members and friends in the process of quitting</p> <p>The health benefits of quitting smoking are:</p> <ul style="list-style-type: none"> • Within 20 minutes, after quitting, the blood pressure and heart rate decreases. • Within 12 hours, the nicotine in the blood gets eliminated. • Within 3 months, circulation and lung function improves. • Within 1 year, the risk of coronary heart disease is cut in half. 				
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			<p>Quitting smoking will help you to lead a perfect life with self esteem and respect from others. The support from friends and family members will redirect you to a newer realm of life.</p> <p><u>Medications Intake</u></p> <ul style="list-style-type: none"> • Take oral tablets as per the order of physician • Don't skip the medications • Take oral hypoglycaemic agents with other medications as per doctor's order • Vials of insulin not in use should be refrigerated • The patient should always have available a spare bottle of each type of insulin used • The person administering insulin 				
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			<p>should inspect the bottle before each use for changes</p> <ul style="list-style-type: none"> • Syringes must never be shared with another person • Inject prescribed amount of insulin as per order <p><u>Foot care</u></p> <ul style="list-style-type: none"> • Meticulous foot care will reduce the chances of forming diabetic foot ulcer • Wear footwear always • Wash legs with potassium permanganate solution twice in a month • Loss of sensation in legs should be informed to your physician • Exercises like walking and climbing steps will enhance the blood 				
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			<p>circulation</p> <p><u>Weight Reduction</u></p> <ul style="list-style-type: none"> • Check your weight every month <p><u>Exercises</u></p> <ul style="list-style-type: none"> • Include exercises such as walking, jogging, climbing steps, swimming, cycling, yoga <p><u>Checking blood sugar level in emergency</u></p> <ul style="list-style-type: none"> • Always check your blood sugar if you feel symptoms of high blood sugar (thirst, frequent urination, fatigue, blurry vision) and immediately consult the physician • Low blood sugar (light headedness, dizzy, confusion, sweating, shaking, fast or pounding heartbeat) .It is important to immediately treat low blood sugar (<70) with a simple 				
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			<p>carbohydrate such as fruit juice or small amount of sugar or glucose</p> <p><u>Checking blood pressure</u></p> <ul style="list-style-type: none"> • Edema of the extremities, vomiting, headache, blurry vision, light headedness are the symptoms of hypertension. Always check your blood pressure if you feel such symptoms <p><u>Follow up</u></p> <p>Regular follow up should be maintained</p> <p>Conclusion</p> <p>Peripheral vascular disease can be prevented by lifestyle modifications and proper follow up. Taking action to control your risk factors can help prevent or delay peripheral vascular disease. There are</p>				
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			<p>several helpful lifestyle changes you can make. quit smoking, eat a healthy diet. Look for foods that are low in total fat, sugar, saturated fat, cholesterol, and sodium , get regular exercise and physical activity. These lifestyle changes can reduce your risk for peripheral vascular disease. and its complications</p>				
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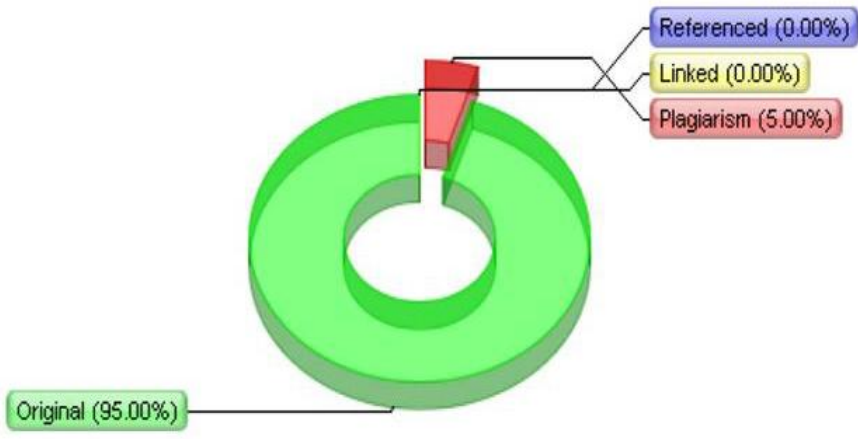
APPENXIX XV

PLAGIARISM ORIGINALITY REPORT

	Plagiarism Detector - Originality Report Plagiarism Detector Project: [http://plagiarism-detector.com] Application core version: 622
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	Document Words Count:	142567

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	Plagiarism Detection Chart:
	
Referenced 0% / Linked 0%	
Original - 95% / 5% - Plagiarism	

APPENDIX XVI

DATA CODE SHEET

Knowledge on Prevention of Peripheral Vascular Disease KPPVD

Pre Test	PRT		
Post Test	POT		
Age in years	AGE	Duration of Diabetes mellitus	DDM
≤30 yrs	1	≤10 yrs	1
31-40yrs	2	11- 15 yrs	2
≥41 yrs	3	≥15 yrs	3
Gender	GEN	Treatment for Diabetes mellitus	TDM
Male	1	Yes	1
Female	2	No	2
Educational status	ES	Duration of hypertension	DH
Illiterate	1	≤10 yrs	1
School level	2	11- 15 yrs	2
Undergraduate	3	≥15 yrs	3
Postgraduate	4	Habit of smoking	HS
Occupation	OCU	Yes	1
Unemployed	1	No	2
Self employed	2	Action to quit smoking	AQS
Government employee	3	Yes	1
Private employee	4	No	2
Marital status	MS	Family history of vascular disease	FHV
Single	1	Yes	1
Married	2	No	2
Income per month	IPM	Family history of Amputation	FHA
≤10000 RS/-	1	Yes	1
10001 – 20000RS/-	2	No	2
≥20000RS/-	3		
Religion	REL		
Hindu	1		
Christian	2		
Muslim	3		
Type of Family	TOF		
Nuclear	1		
Joint	2		

APPENDIX XVII

MASTER CODING SHEET

SL NO	Demographic variable								Clinical variable							KPPVD	
	AGE	GEN	ES	OCU	REL	MS	TOF	IPM	DDM	TDM	DH	HS	AQS	FHV	FHA	PRT	POT
1	3	1	2	4	1	1	1	3	1	1	3	1	1	1	2	9	20
2	3	2	2	1	2	2	2	1	1	1	1	2	2	2	2	11	22
3	2	1	3	4	1	2	1	3	1	1	2	1	1	1	2	5	13
4	3	1	2	3	1	2	1	2	1	1	1	1	1	2	2	10	20
5	2	1	2	3	1	1	2	2	1	1	1	1	1	1	2	19	23
6	2	1	1	2	1	2	1	2	1	1	1	2	1	1	2	6	14
7	2	1	2	2	1	2	2	3	2	1	2	1	1	2	2	12	21
8	3	2	2	1	1	2	1	2	1	1	3	2	2	2	2	8	15
9	2	2	4	4	2	2	2	3	1	1	1	2	2	1	1	21	25
10	3	2	2	1	1	1	2	1	1	1	3	2	2	2	2	5	13
11	2	2	3	1	3	2	2	3	1	1	1	2	2	1	2	10	22
12	2	1	1	3	1	2	1	3	1	1	1	1	1	1	1	18	21
13	2	1	2	2	2	2	1	1	1	2	1	1	1	2	1	9	20
14	3	1	2	2	1	2	2	2	2	2	1	1	1	1	2	12	22
15	3	1	1	2	1	2	1	1	1	1	1	1	1	1	2	8	14
16	2	1	3	4	1	2	1	3	1	1	1	1	1	1	2	17	24
17	2	1	2	2	3	2	1	2	1	2	2	1	1	2	2	11	20
18	3	1	2	2	1	2	1	1	1	1	1	1	1	1	1	5	14
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22	3	2	2	1	1	2	1	2	1	2	2	2	2	2	1	9	16
23	2	1	2	2	1	2	1	2	1	1	1	1	1	2	2	12	20
24	2	2	3	1	1	2	1	2	1	2	1	2	2	1	1	6	13
25	3	1	2	2	1	2	1	2	1	1	1	1	1	2	2	11	20
26	3	1	2	2	1	2	2	2	1	1	1	1	1	2	2	12	21
27	2	1	2	3	1	2	1	2	1	2	1	1	1	1	2	17	23

28	3	1	1	2	1	2	2	2	2	1	1	1	1	1	1	4	13
29	3	1	2	2	1	2	1	2	1	1	2	1	1	2	2	19	22
30	2	1	2	2	2	2	2	2	1	1	2	1	1	2	2	12	20
31	2	1	3	3	1	2	1	2	1	1	1	1	1	2	2	19	23
32	3	1	2	3	1	2	1	2	1	2	2	1	1	2	1	10	15
33	2	2	3	1	3	2	2	3	1	1	1	2	2	2	2	15	22
34	3	2	2	1	1	2	2	2	1	1	2	2	2	1	1	12	20
35	3	1	2	2	1	2	2	2	1	1	1	1	1	2	1	10	16
36	3	1	2	2	1	2	2	2	2	2	2	1	1	2	1	6	13
37	2	2	3	1	1	2	1	3	1	1	1	2	2	2	2	19	23
38	2	2	3	1	1	2	2	1	2	1	2	2	2	2	2	16	21
39	3	2	2	1	1	2	2	1	1	2	3	2	2	1	2	6	14
40	3	1	2	2	1	2	1	2	1	1	1	1	1	2	1	10	16
41	2	2	3	3	1	2	1	3	1	1	1	2	2	2	2	17	23
42	3	1	2	2	1	2	2	1	1	1	1	1	1	2	2	12	20
43	3	1	2	3	1	2	1	2	1	1	2	1	1	2	2	8	13
44	2	2	3	1	1	2	1	3	1	1	2	2	2	2	1	12	20
45	2	2	2	1	1	2	1	2	1	1	2	2	2	1	2	7	16
46	3	2	3	1	1	2	1	2	1	1	3	2	2	2	1	12	20
47	2	2	3	3	1	2	1	2	1	1	1	2	2	2	2	15	21
48	3	1	2	2	1	2	1	2	1	2	1	1	2	2	1	11	20
49	3	1	3	3	2	2	1	3	1	2	1	1	1	2	1	14	24
50	3	1	2	3	1	2	1	2	1	1	3	1	2	2	2	8	20

APPENDIX XVIII
PHOTOGRAPHS DURING DATA COLLECTION

